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CMHC  SCHL

Helping to
house Canadians

Question habitation,
comptez sur nous

**HOUSING
RESEARCH
QUARTERLY**

**RECHERCHE
EN LOGEMENT
RAPPORT
TRIMESTRIEL**

Volume 3
Number 1
1996

Volume 3
Numéro 1
1996



108

**HOUSING
RESEARCH
QUARTERLY**

**RECHERCHE
EN LOGEMENT-
RAPPORT
TRIMESTRIEL**



Volume 3
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HOUSING RESEARCH ORDER FORM

FORMULE DE COMMANDE DE LA
PUBLICATION RECHERCHE EN LOGEMENT

If you wish to receive any of the completed reports or bibliographies listed, or if you would like to be on the mailing list to receive *Housing Research*, please fill out this form and send it to:

Canadian Housing Information Centre
Canada Mortgage and Housing Corporation
700 Montreal Road
Ottawa, Ontario
K1A 0P7

Fax (613) 748-4069

Pour recevoir tout rapport terminé ou les bibliographies indiquées, ou bien encore faire ajouter votre nom à la liste d'envoi de *Recherche en logement*, veuillez remplir cette formule et l'envoyer à :

Centre canadien de documentation sur l'habitation
Société canadienne d'hypothèques et de logement
700, chemin de Montréal
Ottawa (Ontario)
K1A 0P7

Télécopieur (613) 748-4069

Completed Reports Requested / Rapports terminés requis

Bibliographies Requested / Bibliographies requises

- ☐ Send copies of above reports/bibliographies
Veuillez faire parvenir les exemplaires de rapports/bibliographies identifiés ci-dessus
- ☐ Add my name to your mailing list to receive *Housing Research*
Veuillez ajouter mon nom à votre liste d'envoi de la publication *Recherche en logement*

Name / Nom		
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City / Ville	Province	Postal Code / Code postale

INTRODUCTION/INTRODUCTION

Under Part IX of the National Housing Act the Government of Canada provides funds to Canada Mortgage and Housing Corporation to conduct research into the social, economic and technical aspects of housing and related fields.

Housing Research Quarterly is compiled and produced on a quarterly basis by the Canadian Housing Information Centre. This publication provides information and access to research which is undertaken and sponsored by the Corporation.

The publication contains information on completed research reports, new publications, videos and bibliographies, as well as ongoing research projects. An alphabetical title index of items listed is included at the end for quick reference.

"Ongoing Projects" refer to research projects which are currently underway. No reports are yet available. Once the project is completed, and a report is available for distribution, it will be listed in *Housing Research Quarterly* under the "Completed Reports" area with a full bibliographic citation and abstract. The "Ongoing Projects" sections of *Housing Research Quarterly* contain the following information:

Title:

Title of the project, which may not necessarily be the same as the final report.

Objective:

Gives a brief description of the project.

CMHC Project Officer:

Individual within CMHC who is managing the project.

Division:

Division within CMHC which is managing the project.

Contractor:

Individual or firm undertaking the research.

CIDN:

Contract Identification Number.

En vertu de la Partie IX de la loi nationale sur l'habitation le gouvernement du Canada fournit des fonds à la Société canadienne d'hypothèques et de logement pour la recherche sur les aspects sociaux, économiques et techniques du logement et des domaines connexes.

Recherche en logement-rapport trimestriel est produit chaque trimestre par le Centre canadien de documentation sur l'habitation. Il contient des renseignements sur la recherche entreprise et subventionnée par la Société.

La publication présente des renseignements sur les rapports de recherche, les nouvelles publications, les vidéos et les bibliographies, ainsi que sur les projets de recherche en cours. Une liste alphabétique par titres, facile à consulter, se trouve à la fin de l'ouvrage.

Tous les projets non terminés, n'ayant pas encore fait l'objet d'un rapport sont des «projets en cours». Une fois qu'il sera terminé, publié et disponible, le rapport figurera dans la publication *Recherche en logement-rapport trimestriel* sous la rubrique «Rapports terminés» avec références bibliographiques et sommaire. Les sections «Projets en cours» de *Recherche en logement-rapport trimestriel* contiennent les renseignements suivants :

Titre :

Titre du projet, qui n'est pas nécessairement le même que celui du rapport final.

Objet :

Brève description du projet.

Agent de projet pour la SCHL :

Personne au service de la Société qui gère le projet.

Division :

Division de la SCHL chargée de gérer le projet.

Contractant :

Personne ou firme chargée de la recherche.

NIC :

Numéro d'identification du contrat.

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QUALIFICATION DU DEGRÉ DE CONFORT ACOUSTIQUE PROCURÉ PAR LES IMMEUBLES MULTILOGEMENTS

Objet :

L'objectif de la recherche est de doter l'industrie de la construction d'un outil fiable d'évaluation du degré de confort acoustique d'un logement. Ceci peut être accompli en regroupant les connaissances acquises lors de projets de recherche précédents sous forme d'objectifs d'isolation sonore et en élaborant un protocole d'évaluation préliminaire.

Agent de projet pour la SCHL :

M. Desbiens

Division :

Politiques et recherche sociales
et économiques

Programme de subventions de
recherche

Contractant :

Michel Morin

MJM Conseillers en Acoustique
Inc.

6555, chemin Côte-des-Neiges

Bureau 440

Montréal (Québec)

H3S 2A6

NIC :

1461 0200001

ATTICS/GRENIERS

Ongoing Projects/Projets en cours

DEMONSTRATION OF IMPROVED ATTIC VENTILATION AND MOISTURE CONTROL STRATEGIES

Objective:

Test unconventional attic ventilation strategies in both new and existing houses. Use the existing attic computer program to help select which venting strategy will work best.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research
Division

Contractor:

Sheltair Scientific Ltd.
#2-3661 West 4th Avenue
Vancouver, British Columbia
V6R 2P1

CIDN:

1377 0200001

1377 0800001

BUILDING LAW/ RÉGLEMENTATION DE LA CONSTRUCTION

Completed Reports/Rapports terminés

NATIONAL BUILDING CODE ENFORCEMENT: PROVINCE OF NEWFOUNDLAND AND LABRADOR: FINAL REPORT.

Prepared by D.W. Knight Associates. Prepared for Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.

The purpose of the study was to assess the level of National Building Code (NBC) enforcement in the province of Newfoundland along with enforcement capabilities and related technical training needs. The study included a survey of municipalities across Newfoundland and Labrador which have adopted the NBC and private firms offering a building inspection service. Questionnaires were completed through telephone interviews and return mail for 115 municipalities and 28 firms. In addition, consultations were completed with a selection of resource people.

The findings of the survey demonstrate that while the code has been adopted by municipalities throughout the province, it is only enforced through a full building inspection program in three cities and a few of the larger towns. Current economic realities mean that municipalities across the province have limited resources with which to deliver public services. This applies to all forms of development control, including building inspection. There is currently an emphasis on de-regulation by the province and on accommodating development.

In contrast, demand appears to be growing on some fronts for proof of compliance with the NBC, for example, from mortgage companies, mortgage and life underwriters and national companies (as a condition of corporate transfers). Awareness of the need for higher building standards has been raised by a number of court cases across the country where lawsuits have been lodged against municipalities and builders.

Ongoing Projects/Projets en cours

DISCUSSION PAPER ON THE SEPARATE HOUSING CODE

Objective:

Develop a discussion paper on the housing code proposed in the Canadian Commission on Building and Fire Codes (CCBFC) draft strategic plan.

CMHC Project Officer:

S.A. Rothwell

Division:

Technical Policy and Research Division

Contractor:

A.T. Hansen Consulting
Services
702 Roanoke Street
Ottawa, Ontario
K1K 2G4

CIDN:

1660 0300002

IMPACT OF THE REQUIREMENTS CONTAINED IN THE 1995 NATIONAL ENERGY CODE

Objective:

To manage studies which analyze the impact of the requirements contained in the 1995 National Energy Code.

CMHC Project Officer:

W. Webster

Division:

Technical Policy and Research Division

Contractor:

Ontario Hydro
Building Performance
700 University Avenue
Toronto, Ontario
M5G 1X6

CIDN:

1387 0200002

Ongoing Projects/Projets en cours

BIocreTE

Objective:

To develop and test a type of building material and system known as biocrete/biobloc, composed of biomass waste materials and soil cements which may be used together to produce a low cost continuous building envelope.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

2949903 Canada Inc.
118 Valley Drive
Wakefield (Quebec)
J0X 3G0

CIDN:

1444 0200001

MATERIAL ODOUR EMISSIONS TEST METHODS

Objective:

To prepare a review and presentation of odour evaluation techniques which are applicable to materials emissions; review comparative testing of various materials by the most applicable methods and recommend test methods for odour emissions characterization.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research Division

Contractor:

Ortech Corporation
2395 Speakman Drive
Mississauga, Ontario
L5S 1B3

CIDN:

1244 0201007

PLANCHERS FLOTTANTS RÉSIDENTIELS

Objet :

Étudier l'influence du fractionnement et du facteur de forme sur le comportement des matériaux anti-vibrateurs destinés aux planchers flottants durs.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales et économiques
Programme d'encouragement à la technologie du bâtiment résidentiel

Contractant :

Acoustec Inc.
Suite 103
925, rue Newton
Québec (Québec)
G1P 4M2

NIC :

1442 0200001

"T" OR "L" SHAPE METAL CORNERS

Objective:

Develop and test the performance of formed sheet metal corners and studs which replace corner and intersecting 2X4 wood wall studs used solely to attach inner finish panels in housing.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Drago Blazevic
R.R. 1, Site 8, Box 28
49 Overbrook Drive
Waverley, Nova Scotia
B0N 2S0

CIDN:

1498 0200001

**BEST PRACTICE GUIDE ON
BRICK VENEER STEEL
STUDS****Objective:**

To enhance the marketability of the best practice guide on brick veneer steel studs by integrating changes proposed by the market survey.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

Contractor:

Posey Construction
Specifications
P.O. Box 1756
Station 177
Calgary, Alberta
T2P 1L8

CIDN:

1601 0300002

**VERSION FRANÇAISE DU
GUIDE DE RÈGLES DE
L'ART- TECHNOLOGIE DE
L'ENVELOPPE DE
BÂTIMENTS - MURS À
OSSATURE D'ACIER ET
PLACAGE DE BRIQUE****Objet :**

Accroître la commercialité du guide des règles de l'art visant les bâtiments à ossature d'acier et placage de brique en produisant une version française des détails de construction.

Agent de projet pour la SCHL :

J. Rousseau

Division :

Division des politiques et de la
recherche en matière technique

Contractant :

Posey Construction
Specifications
P.O. Box 1756
Station 177
Calgary, Alberta
T2P 1L8

NIC :

1601 0300003

**EIFS RAINSCREEN
PRODUCT SYSTEM****Objective:**

Develop new methods of installing exterior insulation and finish systems (EIFS). The new product system will encompass interconnected aspects of the wall portion of the building envelope.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
Housing Technology Incentives
Program

Contractor:

STO Enterprises Inc.
3495 Laird Road
Units 16-18
Mississauga, Ontario
L5L 5S5

CIDN:

1268 0200001
1268 0201001

**FIELD TEST OF IMPROVED
WALLS****Objective:**

To carry out monitoring on a highrise residential building in Ottawa to assess performance of the brick veneer/steel stud envelope.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

Contractor:

Keller Engineering Associates
Inc.
1390 Prince of Wales Drive
Ottawa, Ontario
K2C 3N6

CIDN:

0411 0301001
0411 0302001
0411 0303001

**PREPARATION OF BEST
PRACTICE GUIDE FOR
FLASHING DETAILS,
MASONRY VENEER/
CONCRETE BLOCK
CONSTRUCTION AND
WOODFRAME
CONSTRUCTION****Objective:**

To prepare three guides on building envelope design: 1) a 'best practice' guide for concrete block exterior wall construction; 2) a 'best practice' guide for various exterior wall assemblies with wood frame construction; 3) a 'best practice' guide for the flashing of wood, concrete and steel frame building envelopes. The documents will contain details, specifications, sequence of construction and information on inspection and commissioning.

CMHC Project Officer:

S. Marshall

Division:

Technical Policy and Research
Division

Contractor:

Robert Halsall &
Associates/Otto & Bryden Arch.
210 Gladstone Avenue
Ottawa, Ontario
K2P 0Y6

CIDN:

0974 0300001

CLADDING/PAREMENT

RAIN CONTROL AND WIND DRIVEN RAIN

Objective:

To carry out work aimed at producing guidelines for the testing and commissioning of pressure equalized rainscreen walls.

CMHC Project Officers:

J. Rousseau; P.-M. Busque

Division:

Technical Policy and Research
Division

Contractor:

Quirouette Building Envelope
Specialists
18 Crispin Private
Ottawa, Ontario
K1K 2T8

CIDN:

1123 0304002
1123 0300004

ZERO-CAVITY, PRESSURE EQUALIZED RAINSCREEN WALL SYSTEM

Objective:

To investigate the performance of the zero-cavity, pressure equalized rainscreen wall system. To investigate the consequences of completely filling the air space behind brick cladding with a fibrous, draining insulation to answer the following questions: can masons build this wall, will the insulation drain, will the cavity pressure equalize, will the brick become too warm or too cold, and will the water reach the sheathing by capillary action?

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

Contractor:

University of Waterloo
Building Engineering Group
Civil Engineering Department
Waterloo, Ontario
N2L 3G1

CIDN:

0689 0300001

Ongoing Projects/Projets en cours

**DOCUMENTATION OF
THE CONDITIONS IN
THE RIVERSDALE
NEIGHBOURHOOD IN
SASKATOON**

Objective:

To document the conditions in the Riversdale neighbourhood in Saskatoon which led to the development of a volunteer inspection service, and develop a volunteer training handbook for use in other municipalities, along with a promotional plan for the handbook.

CMHC Project Officer:

P. Archer

Division:

Technical Policy and Research
Division

Contractor:

University of Manitoba
Department of Family Studies
Winnipeg, Manitoba
R3T 2N2

CIDN:

1379 0300001

Ongoing Projects/Projets en cours

DEVELOPMENT OF A NEW EDITION OF THE STANDARD FOR CONCRETE CONSTRUCTION FOR HOUSING AND SMALL BUILDINGS (CSA A438)

Objective:

To carry out the development of a new edition of the standard for concrete construction for housing and small buildings (CSA A438).

CMHC Project Officer:

J. Robar

Division:

Technical Policy and Research Division

Contractor:

Canadian Standards Association
178 Rexdale Boulevard
Toronto, Ontario
M9W 1R3

CIDN:

1259 0200001

INVESTIGATION AND VALIDATION OF THE COVERCRETE CONCEPT

Objective:

Develop a methodology to produce a concrete with a near surface "skin" that is highly resistant to the ingress of gases and liquids i.e., its properties will be monolithic with the concrete core; translate the research findings to practice through large scale field trials conducted with basements (contractors) and precast elements (precast manufacturers).

CMHC Project Officer:

J. Robar

Division:

Technical Policy and Research Division

Contractor:

National Research Council of Canada
Institute for Research in Construction
1200 Montreal Road
Ottawa, Ontario
K1A 0R6

CIDN:

1517 0200001

CONTAMINATED LANDS/TERRAINS CONTAMINÉS

Ongoing Projects/Projets en cours

THE COMPILATION OF HOUSING DATA FOR SITE SPECIFIC RISK ASSESSMENT PROCEDURES

Objective:

Compile housing data to be used for site specific risk assessments and prepare draft of a handbook to be used by site assessors when selecting house characteristics.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research
Division

Contractor:

Figley Consulting Associates
Ltd.
350 Crean Crescent
Saskatoon, Saskatchewan
S7J 3X2

CIDN:

1534 0200001

THE REDEVELOPMENT OF CONTAMINATED SITES

Objective:

Identify ways to encourage the redevelopment of contaminated sites.

CMHC Project Officer:

D. Myette

Division:

Social and Economic Policy and
Research

Contractor:

Delcan Corporation
2001 Thurston Drive
P.O. Box 8004
Ottawa, Ontario
K1G 3H6

CIDN:

1574 0200001

COOPERATIVE AND NON-PROFIT HOUSING/ LOGEMENT SANS BUT LUCRATIF ET COOPÉRATIVES

Completed Reports/Rapports terminés

COOPÉRATIVES D'HABITATION À CAPITALISATION : EXPLORATIONS RÉCENTES (1980-1990).

Préparé par André Poulin. Ottawa : Société canadienne d'hypothèques et de logement, 1991, c.-à-d., 1995. (Programme de subventions de recherche).

Cette recherche identifie de nouvelles formules de financement pour les coopératives d'habitation reposant, dans des proportions variables, sur un investissement en capital des membres. Dans un premier temps, une liste des formules de coopération dans le domaine de l'habitation est dressée. Par la suite, seize expérimentations sont présentées : quatorze de ces projets sont situés au Québec, l'un en Colombie-Britannique et le dernier en Suède. La moitié de ces projets ont fait l'objet d'une réalisation, les autres étant à un stade plus ou moins avancé de conception. Les cas décrits sont répertoriés en trois grandes catégories :

- les coopératives d'accession à la propriété et à la copropriété;
- les coopératives locatives avec investissement des membres; et
- les coopératives avec droit d'habitation.

La collecte de données s'est déroulée de septembre 1989 à novembre 1990. Les renseignements recueillis ont été structurés suivant dix paramètres : types de promoteurs et de projets, coûts de réalisation, mécanismes de financement, droits de propriété, répartition de la capitalisation, modes de gestion, clientèles visées ou rejointes, impact fiscal, problèmes rencontrés ou envisagés. Une synthèse des résultats permet de dégager les grandes tendances des différentes formules. La capacité de ces modèles d'être reproduits de façon systématique au Québec est abordée dans la conclusion.

Ongoing Projects/Projets en cours

CONSERVATION DU PATRIMOINE IMMOBILIER COOPÉRATIF

Objet :

La recherche a pour thème la conservation du patrimoine immobilier coopératif par l'optimisation des activités d'entretien et de réparations prises en charge par les membres.

Agent de projet pour la SCHL :
N. Gervais

Division :

Politiques et recherche
sociales et économiques
Programme de subventions de
recherche

Contractant :

Monsieur André Poulin
École des hautes études
commerciales
640 - 333, chemin de la
Reine-Marie
Montréal (Québec)
H3V 1A2

NIC :

1281 0200001

**INTÉGRATION DES
MEMBRES PRATIQUES
DE GESTION DES
COOPÉRATIVES
D'HABITATION**

Objet :

La recherche vise à étudier les processus d'intégration et d'habitation au sein des pratiques de gestion en milieu coopérative d'habitation.

Agent de projet pour la SCHL :

N. Gervais

Division :

Politiques et recherche sociales et économiques

Programme de subventions de recherche

Contractant :

Madame Marie J. Bouchard
Université du Québec à Montréal
Case postale 6192
Succursale Centre-ville
Montréal (Québec)
H3C 4R2

NIC :

1451 0200001

**POUR UNE MISE EN
MARCHÉ EFFICIENTE
DES COOPÉRATIVES
D'HABITATION AVEC
INVESTISSEMENT DES
MEMBRES**

Objet :

Évaluer le(s) produit(s) d'habitation coopérative dans une perspective marketing, mais aussi, élaborer une méthodologie de lancement de ces nouveaux concepts.

Agent de projet pour la SCHL :

D. Myette

Division :

Politiques et recherche sociales et économiques

Programme de subventions de recherche

Contractant :

Monsieur Guy Ara
Faculté d'administration
Université de Sherbrooke
Sherbrooke (Québec)
J1K 2R1

NIC :

0907 0200001

**TRAINING & NON-PROFIT
HOUSING ASSOCIATIONS**

Objective:

Contribution to create a self-sustaining program to establish a consistent and coherent approach to education and training for staff and volunteer board members of non-profit housing associations across Canada.

CMHC Project Officer:

B. Lortie

Division:

Direct Portfolio Operations
Division

Contractor:

Canadian Housing and Renewal
Association
251 Laurier Avenue West
Suite 401
Ottawa, Ontario
K1P 5J6

CIDN:

1467 1501001
1467 1500001

Ongoing Projects/Projets en cours

AN EXPLORATION OF DESIRABILITY OF HOUSING LOCATION BY CONSUMERS OF PSYCHIATRIC SERVICES

Objective:

To conduct a focus group comprised of tenants from three types of housing, to conduct 60 semi-structured interviews with tenants in the three aforementioned housing settings.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Ms. Katherine M. Boydell
Queen Street Mental Health
Centre
1001 Queen Street West
Toronto, Ontario
M6J 1H4

CIDN:

1272 0200001

FEASIBILITY OF DISABILITY-INTEGRATED, UNIVERSALLY DESIGNED INFILL CO-HOUSING IN AN URBAN SETTING

Objective:

To create a document which includes: a model of typical infill co-housing based on current literature and post- occupancy evaluation of existing co-housing developments and their residents, etc.

CMHC Project Officer:

T. Parker

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Gail Finkel
The Prairie Partnership
Thompson and MacFarlane
Architects
200-141 Bannatyne Avenue
Winnipeg, Manitoba
R3B 0R3

CIDN:

1101 0200001

HOUSING NEEDS OF PEOPLE WITH DISABILITIES

Objective:

To provide a profile of the housing characteristics and needs of people with disabilities using data from the 1991 Census and post-censal Health and Activity Limitations Survey (HALS).

CMHC Project Officer:

J. Angus

Division:

Social and Economic Policy and
Research

Contractor:

ARK Research Associates
165 Hinton Avenue North
Ottawa, Ontario
K1Y 0Z9

CIDN:

1045 0200003

REVISION OF THE ADAPTING LOW-RISE RESIDENTIAL BUILDINGS REPORT

Objective:

To revise the adapting low-rise residential buildings report to provide valuable guidance on incorporating features which enhance accessibility into low-rise apartments for people with disabilities.

CMHC Project Officer:

T. Parker

Division:

Technical Policy and Research
Division

Contractor:

Sun Ridge Group
2308 Arlington Avenue
Saskatoon, Saskatchewan
S7J 3L3

CIDN:

1532 1100001

SENIORS

Are you ready for the seniors' boom? CMHC has developed a computer program to help you identify the types of housing and support services seniors are looking for in their communities. Community organizations, advocacy groups, consultants and municipal planners alike can use this flexible and powerful tool.

Here's what you'll get:

- A program custom-loaded with the most recent population trends in the communities of your choice.*
- A set of questionnaires that can be used to conduct community surveys.
- A user guide with step-by-step instructions on how to collect, enter and process your data.

To use SENIORS, you will need; an IBM-compatible personal computer; DOS 5.0 or higher; 640 KB RAM; 10 MB hard drive; monochrome or colour monitor; dot matrix or laser printer.

* Price varies according to the number and type of communities selected for the custom data base.

Basic price for rural communities -- less than 10,000 people (on one diskette)

Up to 5 communities	\$125.00
6-10 communities	\$150.00
11-15 communities	\$175.00
16-20 communities	\$200.00
21-25 communities	\$225.00

Basic price for urban communities -- more than 10,000 people (on one diskette)

One community	\$125.00
Each additional community**	\$ 50.00

** Maximum of three communities on one diskette

Basic price for combined communities (on one diskette)

One urban community + up to 5 rural communities	\$150.00
One urban community + 6-10 rural communities	\$175.00
One urban community + 11-15 rural communities	\$200.00
One urban community + 16-20 rural communities	\$225.00
One urban community + 21-25 rural communities	\$250.00

Call the Canadian Housing Information Centre at 613-748-2367 to order your custom copy of SENIORS. Order # 6843E.

ELDERLY/PERSONNES ÂGÉES

AÎNÉS

Êtes-vous prêt pour le boom des aînés? La SCHL a mis au point un programme informatique pour vous aider à déterminer quels types de logements et de services de soutien les aînés recherchent dans leur collectivité. Les organismes communautaires, les groupes de défense d'intérêts particuliers, les consultants et les urbanistes municipaux peuvent tous tirer avantage de cet outil aussi souple que puissant.

Voici ce que vous obtiendrez :

- Un programme personnalisé renfermant les plus récentes tendances démographiques des collectivités de votre choix.*
- Une série de questionnaires pouvant servir à mener des sondages communautaires.
- Un guide expliquant à l'utilisateur, étape par étape, comment recueillir, saisir et traiter les données.

Pour utiliser AÎNÉS, vous devez posséder la plate-forme suivante : un ordinateur personnel compatible IBM, la version 5.0 de DOS ou une version ultérieure, 640 ko de mémoire vive, un disque dur de 10 Mo, un écran couleur ou monochrome, une imprimante matricielle ou à laser.

* Le prix varie en fonction du nombre et du type de collectivités choisies pour constituer la base de données personnalisées.

Prix de base pour les collectivités rurales de moins de 10 000 habitants (Sur une disquette)

Jusqu'à 5 collectivités	125,00 \$
De 6 à 10 collectivités	150,00 \$
De 11 à 15 collectivités	175,00 \$
De 16 à 20 collectivités	200,00 \$
De 21 à 25 collectivités	225,00 \$

Prix de base pour les collectivités urbaines de plus de 10 000 habitants (Sur une disquette)

Une collectivité	125,00 \$
Chaque collectivité additionnelle**	50,00 \$

** Maximum de trois collectivités sur une disquette

Prix de base pour des collectivités rurales et urbaines (Sur une disquette)

Une collectivité urbaine + jusqu'à 5 collectivités rurales	150,00 \$
Une collectivité urbaine + 6 à 10 collectivités rurales	175,00 \$
Une collectivité urbaine + 11 à 15 collectivités rurales	200,00 \$
Une collectivité urbaine + 16 à 20 collectivités rurales	225,00 \$
Une collectivité urbaine + 21 à 25 collectivités rurales	250,00 \$

Communiquez avec le Centre canadien de documentation sur l'habitation au 613-748-2367 pour obtenir un exemplaire personnalisé de AÎNÉS. N° de commande 6842F.

ADAPTING MUNICIPAL HOUSING FOR DEMENTIA

Objective:

To contribute to an understanding of what housing providers can do to help residents with dementia age in place.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Myra Schiff
213 - 110 Richmond Street East
Toronto, Ontario
M5C 2P9

CIDN:

1286 0200001

AGING IN PLACE: STRATEGIES TO MEET THE NEEDS OF SENIOR TENANTS IN NON-PROFIT HOUSING

Objective:

To produce the final manuscript for a publication that will be based on the results of a study that was recently carried out in the province of Nova Scotia: "Aging in Place: Strategies to Meet the Needs of Senior Tenants in Non-profit Housing".

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and Research

Contractor:

Social Data Research Ltd.
130 Slater Street
Suite 750
Ottawa, Ontario
K1P 6E2

CIDN:

1427 0200001

A GUIDE TO PLANNING, DESIGNING, DEVELOPING, MARKETING AND MANAGING HOUSING FOR OLDER CANADIANS

Objective:

To produce an easy to follow and practical guide document that will assist both non-profit groups and the private sector in planning, designing, developing, marketing and managing a wide range of housing choices for older Canadians.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and Research

Contractor:

Baycrest Centre for Geriatric Care
3560 Bathurst Street
North York, Ontario
M6A 2E1

CIDN:

0869 0200001

HOUSING OPTIONS FOR CANADIANS WITH DEMENTIA

Objective:

To produce an easy to follow, illustrated and practical guide document on innovative housing options for people who suffer from dementia.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and Research

Contractor:

Communitas Consultants
4550 Beverley Crescent
Vancouver, British Columbia

V6J 4E6

CIDN:

1251 0200001

MODÈLES D'INTERVENTION : SÉCURITÉ EN CAS D'URGENCE DES PERSONNES À MOBILITÉ RÉDUITE ET DES PERSONNES ÂGÉES EN PERTE D'AUTONOMIE

Objet :

Cette étude a pour objectif d'intégrer les connaissances et les réflexions actuelles concernant la problématique de la sécurité des personnes âgées et des personnes handicapées vivant en milieu résidentiel régulier, afin de les appliquer au développement des modèles d'intervention pour trois bâtiments multifamiliaux munis d'ascenseur.

Agent de projet pour la SCHL :

L. Rodriguez

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Madame Sylvie Quintin
Société Logique Inc.
3250, Boulevard St.-Joseph Est
Montréal (Québec)
H1Y 3G2

NIC :

1460 0200001

NEIGHBOURHOOD GROUP HOMES: THE PLANNING, DESIGN AND DEVELOPMENT PROCESS

Objective:

To produce a number of key recommendations, guidelines, and development strategies that will shorten the learning curve for the volunteers, bureaucrats and professionals who usually develop small group homes for seniors.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Ms. Clarke and Dr. Gutman
Gerontology Research Centre
Simon Fraser University
2800 - 515 West Hastings Street
Vancouver, British Columbia
V6B 5K3

CIDN:

1453 0200001

REGIONAL SENIORS RESEARCH ACTIVITY - ATLANTIC

Objective:

To raise awareness in the Fredericton area of the network to ensure that seniors fully utilize the Seniors Renovation Advisory Network's Service; to develop and implement a communication plan for the service.

CMHC Project Officer:

B. Gray

Division:

Atlantic Region

Contractor:

Bissett Matheson
Communications
31 William Street
Fredericton, New Brunswick
E3A 4V7

CIDN:

0883 1351001

REGIONAL SENIORS RESEARCH ACTIVITY - ATLANTIC

Objective:

To test a model in which trades people retired from the construction field, or other interested volunteers, are trained to inform seniors on home adaptations and repairs.

CMHC Project Officer:

B. Gray

Division:

Regional Offices

Contractor:

New Brunswick Department of
Municipalities, Culture and
Housing
P.O. Box 6000
Fredericton, New Brunswick
E3B 5H1

CIDN:

0883 1350003

LA TRANSFORMATION D'HABITATIONS À LOYERS MODIQUES (HLM) POUR PERSONNES ÂGÉES EN HLM MIXTES

Objet :

Examiner les effets sur les résidents de la conversion d'ensembles de logements locatifs à loyer modique pour aînés en ensembles mixtes conçus de manière à permettre aux familles et aux résidents à faibles revenus âgés de moins de 55 ans d'y vivre.

Agent de projet pour la SCHL :

C. Lepage

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

Madame Francine Dansereau
INRS-Urbanisation
3465, rue Durocher
Montréal (Québec)
H2X 2C6

NIC :

1642 0200001

Ongoing Projects/Projets en cours

ASSESS THE INDOOR ENVIRONMENT AND ENERGY CONSUMPTION CHARACTERISTICS OF 8 MID-RISE RESIDENTIAL BUILDINGS

Objective:

To analyze energy and air quality in mid-rise residential buildings, through a survey of four mid-rise residential buildings in both Toronto and Vancouver.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research Division

Contractor:

Scanada Consultants Limited
446 Reynolds Street
Oakville, Ontario
L6J 3M4

CIDN:

1373 0200001
1373 0800001

COMMUNITY ENERGY SYSTEM PROJECT: ENERGY EVALUATION OF SENIORS HOUSING UNIT - WHITESANDS FIRST NATION

Objective:

To accurately determine the energy loads for a small cogeneration facility to serve a 10 unit seniors housing project at Whitesands First Nation near Armstrong, Ontario.

CMHC Project Officer:

C. Ives

Division:

Technical Policy and Research Division
Panel on Energy Research and Development

Contractor:

R. Donn Milligan
1050633 Ontarion Inc.
Kenora, Ontario
P9N 3X7

CIDN:

1032 0800002

ENERGY AUDITS OF TEN HIGH-RISE RESIDENTIAL BUILDINGS

Objective:

To determine the total energy gain and losses for 10 high-rise buildings across the country.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research Division

Contractor:

Scanada Consultants Limited
436 MacLaren Street
Ottawa, Ontario
K2P 0M8

CIDN:

1291 0300001

ENERGY PERFORMANCE CONTRACTING AND THE RESIDENTIAL SECTOR

Objective:

To explore the feasibility of applying energy performance contracting to the residential sector.

CMHC Project Officer:

D. D'Amour

Division:

Social and Economic Policy and Research

Contractor:

Marbek Resource Consultants Ltd.
Suite 500
1355 Bank Street
Ottawa, Ontario
K1H 8K7

CIDN:

1372 0200001

ENVIRONMENTAL IMPACT STUDY FOR HOUSING ENERGY EFFICIENCY TECHNOLOGY IMPACTS

Objective:

To assess the energy efficiency of improved thermal envelope performance and the impact of the envelope changes on the general environment and on indoor air quality.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research Division
Panel on Energy Research and Development

Contractor:

SAR Engineering Limited
8884 - 15th Avenue
Burnaby, British Columbia
V3N 1Y3

CIDN:

0847 0200001
0847 0201001

GUIDELINES FOR THE RETROFIT OF UNINSULATED MASONRY WALLS (PHASE 2)

Objective:

Assessment of various retrofit strategies for the common forms of masonry walls identified.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

National Research Council of
Canada
1200 Montreal Road
Ottawa, Ontario
K1A 0R6

CIDN:

1428 0201001

HEAT, AIR, AND MOISTURE TRANSFER IN HIGH-RISE BUILDING ENVELOPES

Objective:

To develop design guidelines for energy efficiency and durability of wall structures and roofing systems of residential high-rise buildings.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

National Research Council
Building M-20
Montreal Road
Ottawa, Ontario
K1A 0R6

CIDN:

0719 0200001
0719 0201001

LOG HOUSING AIR-SEALING DETAILS

Objective:

To produce illustrations and text describing air-sealing details for rectangular-milled and round scribed log-wall house construction systems for inclusion in the document "The Details of Air-Barrier Systems for Houses" as referenced in the upcoming edition of the National Energy Code for Housing.

CMHC Project Officer:

R. Duncan

Division:

Technical Policy and Research
Division

Contractor:

Jools Development
P.O. Box 107
Quadville, Ontario
L0J 2G0

CIDN:

1578 0300001

MONITORING OF THE ENERGY EFFICIENT APARTMENT BUILDINGS AND MECHANICAL SYSTEMS

Objective:

To carry out monitoring of the energy efficient apartment buildings and mechanical systems at 3015 and 3023 Parkerhill Road, Mississauga.

CMHC Project Officer:

W. Webster

Division:

Technical Policy and Research
Division
Panel on Energy Research and
Development

Contractor:

Tatry - Pathway Co-op
Peel Non-profit Housing
3015 Parkerhill Road
Mississauga, Ontario
L5B 4B3

CIDN:

1260 0200001
1260 0800001

PRECALCULATION OF THERMAL PERFORMANCE VALUES FOR TABLES IN THE 1995 NATIONAL ENERGY CODE

Objective:

To precalculate thermal performance values of building assemblies for the National Energy Code for Buildings 1995 and the National Energy Code for Houses 1995.

CMHC Project Officer:

W. Webster

Division:

Technical Policy and Research
Division

Contractor:

Enermodal Engineering Limited
368 Phillip Street
Waterloo, Ontario
N2L 5J1

CIDN:

1387 0200001

UPGRADING OF OPTIMIZE

Objective:

Update Statistics Canada data; programme revision and upgrade; expansion of programme versatility; users guide; first level beta testing; second level beta testing of Optimize.

CMHC Project Officer:

P. Russell

Division:

Technical Policy and Research Division

Contractor:

Sheltair Scientific Ltd.
2-3661 West 4th Avenue
Vancouver, British Columbia
V6R 1P2

CIDN:

0865 0201002

WOOD FUELED DOMESTIC ENERGY CONVERSION SYSTEMS

Objective:

To carry out a study of wood fueled domestic energy conversion systems.

CMHC Project Officer:

P. Russell

Division:

Technical Policy and Research Division

Contractor:

Allen Associates
400 Mount Pleasant Road

Suite 5

Toronto, Ontario
M4S 2L6

CIDN:

1423 0200001

1423 0800001

Completed Reports/Rapports terminés

ÉTUDE D'EXPOSITION AU RADON²²² DANS LES RÉSIDENCES DE LA PROVINCE DE QUÉBEC.

Préparé par Benoît Lévesque, Denis Gauvin... et autres. Ottawa : Société canadienne d'hypothèques et de logement, 1995. (Programme de subventions de recherche).

Depuis quelques années, on s'inquiète de la présence du radon (²²²Rn) dans les résidences. Celle-ci est principalement due à une infiltration à travers les fondations des habitations en provenance du sol environnant. Les autorités de différents pays sont partagés quant à l'importance des effets du radon domiciliaire pour la santé humaine. Au Canada, la limite de référence est de 800 becquerels par mètre cube (Bq/m³). Cette étude avait trois objectifs : évaluer les concentrations moyennes annuelles de ²²²Rn présentes dans un échantillon représentatif d'habitations de la province de Québec; identifier les facteurs (formation géologique, type d'habitation etc.) les plus déterminants quant à la contamination des domiciles par le ²²²Rn; et déterminer si la population du Québec est significativement exposée au ²²²Rn.

Les chercheurs ont visé un échantillon de 1 000 habitations réparties en deux zones selon la probabilité théorique de trouver des concentrations élevées de ²²²Rn, la zone 1 pour les régions à risque, et la zone 2 pour les régions non à risque. Pour délimiter la zone 1, différents indicateurs géologiques ont été utilisés qui ont, par la suite, été validés. En fonction de cette validation, des cartes géographiques ont été tracées. On constate que les endroits ciblés se situent dans des régions peu peuplées, soit moins de 1 % de la population québécoise.

Seulement 2 habitations avaient des concentrations de radon supérieures à 800 Bq/m³, soit 1 dans la zone à risque et 1 dans la zone non à risque. En examinant les données disponibles provenant d'autres études concernant les concentrations de radon au Québec, la région de la paroisse d'Oka constitue un cas unique puisqu'on y a documenté plusieurs maisons dont les concentrations sont supérieures à 800 Bq/m³. La comparaison des résultats avec ceux obtenus dans d'autres études d'exposition à travers le monde indique que la population québécoise est peu exposée au radon dans les résidences.

Pour les nouvelles constructions, l'application de mesures de protection (ex. : membrane d'étanchéité sous la fondation) contre l'infiltration des gaz en provenance du sol telles que décrites dans le code du bâtiment canadien est sans aucun doute un moyen de prévention adéquat d'autant plus que ces mesures permettent également de régler d'autres problèmes comme l'excès d'humidité dans l'habitation. Pour les maisons existantes, les propriétaires peuvent, pour un montant variant entre 35,00 \$ et 100,00 \$, vérifier les concentrations de radon dans leur habitation. En fonction des résultats, il existe des techniques efficaces (ventilation de la dalle de béton, calfeutrage des fissures) qui permettent d'abaisser les concentrations.

HEALTHY MATERIALS: A COMMUNIQUÉ ON MATERIAL EMISSION TESTING AND STANDARDS ACTIVITIES.

Issue No. 3. Ottawa: Canada Mortgage and Housing Corporation, Summer 1995.

The emphasis of this third issue of Healthy Materials is on emissions data, with descriptions of some of the key databases being developed internationally and summaries of two recent material testing projects in Canada. A feature article provides an overview of emissions research being undertaken by the Environmental Protection Agency in the United States. Recent developments in two material labelling programs - one in Denmark and one in Canada - are also highlighted. In addition, an editorial by Jim White challenges the view that low-polluting materials are too costly.

NOTE : Aussi disponible en français sous le titre : Matériaux sains : un bulletin sur les activités relatives aux essais et aux normes d'émission des matériaux.

MATÉRIAUX SAINS : UN BULLETIN SUR LES ACTIVITÉS RELATIVES AUX ESSAIS ET AUX NORMES D'ÉMISSION DES MATÉRIAUX.

NO. 3. Ottawa : Société canadienne d'hypothèques et de logement, été 1995.

Cette troisième livraison de Matériaux sains met l'accent sur les données d'émission. On y trouvera la description de certaines bases de données clés mises au point dans le monde et le résumé de deux essais de matériaux récemment réalisés au Canada. Un article de fond brosse un tableau de la recherche sur les émissions qu'effectue l'Environmental Protection Agency des États-Unis. On fait aussi état des récents progrès accomplis dans le cadre de deux programmes d'étiquetage des matériaux, l'un au Danemark, l'autre au Canada. Enfin, en éditorial, Jim White remet en question la perception selon laquelle les matériaux peu polluants coûtent trop cher.

NOTE: Also available in English under the title: Healthy Materials: A Communiqué on Material Emission Testing and Standards Activities.

LES MOISSURES DANS LES MAISONS : RAISONS DE LEUR PROLIFÉRATION ET RAISONS DE NOS PRÉOCCUPATIONS.

Préparé par Morrison Hershfield Limited, Ingénieurs - conseils. Préparé pour la Division de la recherche, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1995.

Au cours d'une étude antérieure menée dans la ville de Wallaceburg (Ontario), on a mesuré les polluants biologiques dans les maisons et examiné la santé des occupants. Cette étude a permis de constater un écart considérable dans l'importance de la contamination par des polluants biologiques et une corrélation de ces mesures avec les mesures subjectives de la santé obtenues au moyen de questionnaires sur la santé. Pour la phase II du projet de Wallaceburg, on a choisi un groupe de maisons affectées des pires niveaux de contamination par des polluants biologiques, ainsi qu'un autre groupe parmi les moins affectées, aux fins d'une étude plus détaillée.

Cinquante-neuf maisons choisies sur la base de mesures antérieures de leur niveau de moisissures ont fait l'objet d'une inspection des lieux, d'essais et d'un suivi. On a effectué des mesures subjectives de la santé au moyen d'un questionnaire et d'un examen physique sommaire de chaque occupant; on a aussi procédé à des mesures objectives de la santé par des prélèvements de sang et de sécrétions nasales. Les données sur le rendement des maisons, sur la prolifération de moisissures et sur l'état de santé ont été introduites dans une base de données informatisée aux fins de recherche ultérieure. L'étude a révélé une corrélation entre les mesures de prolifération de moisissures et les réponses immunitaires des occupants. La prolifération de moisissures semble liée davantage aux sources locales de moisissures qu'aux niveaux de ventilation.

NOTE: Also available in English under the title: Moldy Houses: Why They Are & Why We Care.

ENVIRONMENTAL POLLUTION AND CONTROL/ POLLUTION DE L'ENVIRONNEMENT ET SON CONTRÔLE

MOLDY HOUSES: WHY THEY ARE & WHY WE CARE: FINAL REPORT.

Prepared by Morrison Hershfield Consulting Engineers. Prepared for Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.

A previous study, carried out in the Town of Wallaceburg, Ontario measured biologically-active contaminants in houses and explored the health of occupants. This study found a great variation in the magnitude of biologically-active contamination and a correlation of these measures with subjective measures of health obtained through the health questionnaires. The Wallaceburg Phase II project selected a group of houses with the worst levels of biological contamination and those with the least for more detailed study.

Fifty-nine houses were subjected to field inspection, testing and monitoring. Subjective measures of health were gained through questionnaires and brief physical examinations of all occupants. Objective measures of health were explored by the collection of samples of blood and nasal secretions. Data on house performance, mold growth and health was compiled in an electronic database available for future researchers. The work showed correlations between measurements of mold growth and immunological reactions of occupants. Mold growth appeared to be more related to local moisture sources than ventilation levels.

NOTE : Aussi disponible en français sous le titre : Les Moisissures dans les maisons : raisons de leur prolifération et raisons de nos préoccupations.

Ongoing Projects/Projets en cours

ADVICE ON THE DRAFTING OF EMISSION TEST STANDARDS

Objective:

Provide specific advice on improving three draft emission test standards for caulks and sealants and pressed wood products.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research
Division

Contractor:

Stewart S. Fritts
2415 Lazybrook
Houston, Texas
77008

CIDN:

0200002

DEVELOPMENT OF A MECHANICAL SYSTEM FOR A RESIDENTIAL CLEAN HOME

Objective:

To determine the best mechanical system or systems that will provide heating and ventilation for the "clean" addition to an existing house.

CMHC Project Officer:

V. Salares

Division:

Technical Policy and Research
Division

Contractor:

Drerup-Armstrong Ltd.
P.O. Box 130
Carp, Ontario
K0A 1L0

CIDN:

1213 1100001
1213 1101001

**DIRECTORY OF
RESIDENTIAL INDOOR AIR
QUALITY PRODUCTS AND
SERVICES**

Objective:

To develop a directory of residential indoor air quality products and services.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research
Division
Panel on Energy Research &
Development

Contractor:

Cullbridge Marketing and
Communications
809 Quinlan Road
Ottawa, Ontario
K1G 1R8

CIDN:

1244 0201003
1244 0800002

**AN EVALUATION OF THE
SCREENING
MEASUREMENT AS AN
INDICATOR OF AVERAGE
ANNUAL INDOOR RADON
EXPOSURE**

Objective:

Assess the short term screening measurement as an indicator of the average annual radon levels in homes.

CMHC Project Officer:

J. White

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Michael W.R. LaFontaine
LaFontaine Consulting Services
106 Krug Street
Kitchener, Ontario
N2H 2X9

CIDN:

1276 0200001

**EXTERNAL REVIEW OF
CMHC PROJECT ON EMF
(ELECTROMAGNETIC
FIELDS) IN CANADIAN
HOUSING**

Objective:

To review CMHC's exploratory survey project on EMF in Canadian housing which will include a literature review, a field survey of 25 Canadian houses, and a final report.

CMHC Project Officer:

C. Ives

Division:

Technical Policy and Research
Division

Contractor:

Dr. Paul Heroux
McGill University School of
Occupational Health
1130 Pine Avenue West
Montreal (Québec)
H3A 1A3

ENERGETICS Inc.

7164 Columbia Gateway Drive
Columbia, MD
21046

CIDN:

1051 0200003
1051 0200002

**GOOD HOUSES, BAD
HOUSES, WALLACEBURG
PHASE II**

Objective:

A study of the performance of houses and the health of people in them.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research
Division

Contractor:

Morrison Hershfield Limited
4 Lansing Square
North York, Ontario
M2J 1T1

CIDN:

1368 02401

**GUIDANCE BOOKLET ON
RADON**

Objective:

To create a national version of a guidance booklet on radon, designed for both builders and householders.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research
Division

Contractor:

Ken Klassen
58 Fulham Avenue
Winnipeg, Manitoba
R3N 0G2

CIDN:

1658 0200001

**MECHANICAL SYSTEM FOR
THE CMH4C HOUSE**

Objective:

To supply a prototype mechanical system for a prefab house designed specifically for people who are environmentally hypersensitive.

CMHC Project Officer:

P. Russell

Division:

Technical Policy and Research
Division

Contractor:

Geddes Enterprises
45 Massey Lane
Bramalea, Ontario
L6S 2V8

CIDN:

0928 1103001

ENVIRONMENTAL POLLUTION AND CONTROL/ POLLUTION DE L'ENVIRONNEMENT ET SON CONTRÔLE

A PLANNING MODEL FOR ESTIMATION OF PHOSPHORUS LOADING FROM ON-SITE SYSTEMS

Objective:

A systematic examination of the variables that may control phosphorus contributions to lakes. The model will recognize loadings leaving an on-site system, differences between failed systems and normal operation, geology, and soils.

CMHC Project Officer:

J. Robar

Division:

Social and Economic Policy
and Research
External Research Program

Contractor:

Dr. Donald H. Waller
Technical University of N.S.
P.O. Box 1000
Halifax, Nova Scotia
B3J 2X4

CIDN:

0918 0200001

REVIEW OF PAINT EMISSION STUDIES USING TRADITIONAL METHODS AND RECENT CHAMBER STUDIES

Objective:

To search international databases; review studies; evaluate the significance of the findings; draft a CSIRO document; and have the document reviewed by the industry.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research
Division

Contractor:

CSIRO, Australia
Graham Road
P.O. Box 56
Highett, VC 3190

CIDN:

1244 0201006

ROUND-ROBIN TESTING OF VOLATILE ORGANIC (VOC) EMISSIONS FROM COMMON BUILDING MATERIALS

Objective:

To test, analyse, and submit a report of volatile organic (VOC) emissions from common building materials.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research
Division

Contractor:

Saskatchewan Research
Council
Building Science Division
15 Innovation Boulevard
Saskatoon, Saskatchewan
S7N 2X8

CIDN:

1244 0201008

SURVEY OF ADVERSE HEALTH EFFECTS OF MOULD EXPOSURE

Objective:

To support the survey called "The Respiratory Health Effects of Indoor Moulds". This study will look at about 500 houses to identify how much biologically-active material there is in house air and dust. Frequency of cough will also be measured and compared to parental reports. In the final phase, the health of occupants

will be assessed as well as the reasons for moisture problems in 100 of the houses.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research
Division

Contractor:

Health and Welfare Canada
Bureau of Chemical Hazards
Environmental Health Centre
Room 130, Tunney's Pasture
Ottawa, Ontario
K1A 0L2

CIDN:

0843 0201001

A SURVEY OF ELECTROMAGNETIC FIELD LEVELS IN CANADIAN HOUSING

Objective:

To review the state-of-the-art in knowledge and housing research into EMF and prepare an interim report, to conduct a field survey of EMF levels in representative housing, and to prepare a report on the findings with recommendations for remedial measures.

CMHC Project Officer:

C. Ives

Division:

Technical Policy and Research
Division

Contractor:

The Planetary Association for
Clean Energy Inc.
100 Bronson Avenue
Suite 1001
Ottawa, Ontario
K1T 6G8

CIDN:

1051 0200001

HOUSING THE NEW FAMILY: REINVENTING HOUSING FOR FAMILIES: A RESEARCH SUMMARY.

Prepared by Laura C. Johnson Associates Inc. Ottawa: Canada Mortgage and Housing Corporation, Centre for Future Studies in Housing and Living Environments, 1995.

This report is a summary of the full-length research report, Housing the New Family: Reinventing Housing for Families. It surveys the attitudes of young Canadian families to new, family-oriented housing ideas. The work is based on a collection of eleven case studies, including non-profit and market housing from across Canada, as well as several European housing developments. The case study examples have a number of characteristics in common. All are medium-density housing alternatives to single detached homes and have been designed for various types of families. With some exceptions, the unique features in the case study projects tend to be located outside the individual private dwellings.

Re-thinking family housing in this way involves two key themes. One relates to the community dimension in housing and the value placed on social interaction among neighbours. The second relates to the provision of common amenity spaces as part of a housing environment. New, higher-density housing models build on the premise that young families are interested in both of these elements. Under these two major themes, there are five specific features which have been identified as elements of "family-friendly" housing. They are: family-oriented amenities on site; common spaces that promote interaction among residents; the provision of child and youth-oriented facilities; a reduced role for automobiles; and spatial flexibility to accommodate the changing needs of families.

NOTE : Aussi disponible en français sous le titre : Loger la famille nouvelle : réinventer le logement des familles : résumé de recherche.

LOGGER LA FAMILLE NOUVELLE : RÉINVENTER LE LOGEMENT DES FAMILLES : RÉSUMÉ DE RECHERCHE.

Préparé par Laura C. Johnson Associates Inc. Ottawa : Société canadienne d'hypothèques et de logement, Centre d'études prospectives sur l'habitation et le cadre de vie, 1995.

Ce rapport est un résumé de la version intégrale du rapport de recherche intitulé Housing the New Family: Reinventing Housing for Families. Il passe en revue les attitudes de jeunes familles canadiennes envers les nouvelles idées de logements axés sur la famille. L'étude porte sur onze cas d'études, dont les logements sans but lucratif et des logements du marché de tout le Canada de même que plusieurs ensembles d'habitations européens. Ces onze ensembles ont certains éléments en commun. Il s'agit dans tous les cas d'habitations de densité moyenne, de solutions de rechange aux maisons individuelles. À quelques exceptions près, les caractéristiques particulières de ces ensembles sont plutôt situées à l'extérieur des logements proprement dits.

FAMILIES/FAMILLES

Le renouvellement du logement des familles comporte deux volets. Le premier touche la dimension communautaire et la valeur que l'on accorde à l'interaction sociale entre les voisins. Le second touche l'aménagement d'espaces communs dans le cadre du milieu d'habitation. Les nouveaux modèles à plus haute densité partent de la prémisse que les jeunes familles s'intéressent à ces deux volets. À l'intérieur de ces deux volets, on distingue cinq éléments particuliers qui rendent les logements adaptés aux familles.

Ce sont : la présence sur les lieux de services et d'équipements axés sur la famille; des espaces communs qui favorisent l'interaction sociale entre les résidents; des équipements destinés aux enfants et aux adolescents; le rôle réduit de l'automobile; et la flexibilité spatiale pour répondre à l'évolution des besoins des familles.

NOTE: Also available in English under the title: *Housing the New Family: Reinventing Housing for Families: A Research Summary*.

FIRE SPRINKLERS/EXTINCTEURS AUTOMATIQUES

Ongoing Projects/Projets en cours

COSTS AND BENEFITS FOR MUNICIPALITIES OF MANDATORY RESIDENTIAL FIRE SPRINKLERS

Objective:

This study will impartially assess on technically-justified economic grounds the costs and benefits to municipalities and other jurisdictions of mandatory installation of fire sprinklers in all new residential construction. Secondly, the assessment will identify the benefits and risks of automatic sprinklers, and the effects on construction costs, housing costs, and on maintenance and service costs.

CMHC Project Officer:

T. Kerwin

Division:

Technical Policy and Research
Division

Contractor:

Arencon Inc.
1401 Captain Court
Mississauga, Ontario
L5J 1A9

CIDN:

1235 0300002

1235 0302001

HEATING/CHAUFFAGE

Ongoing Projects/Projets en cours

DRAIN GAIN

Objective:

To test and evaluate the drain gain, a waste water heat recovery exchanger and storage device aimed at the residential market.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Winston MacKelvie
Box 1156
Knowlton (Québec)
J0E 1V0

CIDN:

1443 0200001

POÊLES À BOIS ET QUALITÉ DE L'AIR INTÉRIEUR

Objet :

Comparer la qualité de l'air intérieur entre des maisons de la région de Québec utilisant un poêle à bois comme source de chauffage à d'autres habitations qui n'en utilisent pas.

Agent de projet pour la SCHL :

D. Fugler

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

Benoît Lévesque
Centre de santé publique de
Québec
2050, boulevard René-Lévesque
ouest
Sainte-Foy (Québec)
G1V 2K8

NIC :

1459 0200001

SUPPORT FOR THE HEAT EXCHANGER LEAKAGE STUDY

Objective:

To carry out "support for the heat exchanger leakage study".

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research
Division

Contractor:

Geddes Enterprises
45 Massey Street
Brampton, Ontario
L6S 2V8

CIDN:

1505 0200002

HIGH-RISE CONSTRUCTION/ CONSTRUCTION D'IMMEUBLES DE GRANDE HAUTEUR

Ongoing Projects/Projets en cours

ANALYSIS OF OPERATING EXPENDITURES IN PRIVATE SECTOR RESIDENTIAL HIGH-RISE BUILDINGS

Objective:

To develop operating cost profiles for the limited sample of private sector cost data received from the industry associations BOMA and REIC and make comparisons with social housing data previously obtained.

CMHC Project Officer:

W. Webster

Division:

Technical Policy and Research
Division

Contractor:

ARK Research Associates
165 Hinton Avenue North
Ottawa, Ontario
K1Y 0Z9

CIDN:

1024 02000004

DEVELOPMENT AND DELIVERY OF A TRAINING COURSE AND WORKSHOP ON TECHNICAL AUDITS OF MULTI-UNIT RESIDENTIAL BUILDINGS

Objective:

Preparation of an Instructor's manual, a student's manual and the delivery of a pilot workshop relating to technical audits of multi-unit residential buildings.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

Contractor:

Buchan Lawton Parent Ltd.
Unit 5
5370 Canotek Road
Ottawa, Ontario
K1J 9E6

CIDN:

1537 0300001

DEVELOPMENT OF A COMMISSIONING PLAN FOR THE WINNERS OF THE IDEAS CHALLENGE

Objective:

Develop a plan for commissioning the building envelope for thermal performance, airtightness and water penetration control to be utilized by the winners of the IDEAS Challenge.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

Contractor:

Morrison Hershfield Limited
2440 Don Reid Drive
Ottawa, Ontario
K1H 8P5

CIDN:

0840 0306001

EVALUATION OF POLLUTANT SOURCE STRENGTHS AND CONTROL STRATEGIES IN AN INNOVATIVE HIGH-RISE RESIDENTIAL BUILDING

Objective:

To evaluate the pollutant source strengths and control strategies in an innovative residential high-rise building.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division
Panel on Energy Research and
Development

Contractor:

SIRICON
1455 Boulevard Maisonneuve
Ouest
Montréal, Québec
H3G 1M8

CIDN:

1557 0200001
1557 0300001
1557 0800001

HIGH-RISE CONSTRUCTION/ CONSTRUCTION D'IMMEUBLES DE GRANDE HAUTEUR

INDUSTRY GUIDELINES ON THE COMPART- MENTALIZING OF THE PRESSURE EQUALIZED CAVITY

Objective:

To produce industry guidelines on the compartmentalizing of the pressure equalized cavity.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

Contractor:

Boundary Layer Wind Tunnel
Laboratory
University of Western Ontario
London, Ontario
N6A 5B9

CIDN:

1123 0300002

INVESTIGATE THE EFFECTS OF COMPARTMENTALIZING APARTMENTS OF HIGH- RISE BUILDINGS TO REDUCE STACK PRESSURES

Objective:

To carry out a study to investigate the effects of compartmentalizing apartments of high-rise buildings to reduce stack pressures.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

Contractor:

Morrison Hershfield Limited
2440 Don Reid Drive
Ottawa, Ontario
K1H 8P5

CIDN:

1331 0300001

MONITOR THE PERFORMANCE OF A HIGH-RISE RESIDENTIAL BUILDING ENVELOPE RETROFIT

Objective:

To study the impact of retrofits on the heat, air and moisture transport characteristics of newly renovated envelopes.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division
Panel on Energy Research and
Development

Contractor:

Morrison Hershfield Limited
2440 Don Reid Drive
Ottawa, Ontario
K1H 8P5

CIDN:

1602 0200001
1602 0800001

OPERATING MECHANICAL AND ELECTRICAL EQUIPMENT AND SYSTEMS IN MEDIUM AND HIGH-RISE RESIDENTIAL BUILDINGS

Objective:

To develop reference documents and training materials for operating mechanical and electrical equipment and systems in medium and high-rise residential buildings.

CMHC Project Officer:

W. Webster

Division:

Technical Policy and Research
Division

Contractor:

Efficiency Engineering
Incorporated
978 Mary Avenue
Cambridge, Ontario
N3H 4N5

CIDN:

1250 0200001

HOME-BASED BUSINESSES/ ENTREPRISES ÉTABLIES À DOMICILE

Ongoing Projects/Projets en cours

HOME-BASED BUSINESSES, LOCAL ECONOMIC DEVELOPMENT AND LAND USE POLICY: CONFLICTS AND OPPORTUNITIES

Objective:

Estimate the roles and
significance of home-based
businesses in a set of Canadian
cities.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Dr. James A. Randall
Department of Geography
University of Saskatchewan
Saskatoon, Saskatchewan
S7N 0W0

CIDN:

1464 0200001
1464 0201001

Completed Reports/Rapports terminés

INVENTORY OF PROJECTS AND PROGRAMS ADDRESSING HOMELESSNESS.

Prepared by Focus Consulting. Ottawa: Canada Mortgage and Housing Corporation, 1995.

This inventory is intended as a resource guide for organizations devoted to the problems and challenges of homelessness. The projects and programs in the inventory have been carried out since the 1987 International Year of Shelter for the Homeless. While the focus of the study was Canada and the United States, an attempt was made to identify initiatives in Europe and Australia. The inventory is not intended to be exhaustive, but rather to include selected examples of initiatives that show some innovation and have not, in most cases, been previously documented or widely disseminated. Initiatives were selected based on the following criteria: 1) alternative financing; 2) illustration of partnerships; 3) innovative management and/or administration; 4) comprehensiveness illustrating a multi-strategy approach; and 5) self-help.

The report consists primarily of a series of fact sheets describing specific initiatives that have addressed the range of homeless issues. Each fact sheet provides the following descriptive information: 1) the initiative's location; 2) the year established; 3) the initiative's objective; 4) the responsible agency(ies); 5) the target population; 6) the services provided; 7) unique/innovative aspects; 8) sources(s) of funding; 9) methods of reducing costs; 10) total budget; and 11) a contact for further information.

Ongoing Projects/Projets en cours

DEVELOPMENT AND TESTING OF A "HOMELESS" DATA COLLECTION AND MANAGEMENT SYSTEM (PHASE 1)

Objective:

Development of requirements for a "Homeless" data collection and management system.

CMHC Project Officer:

B. Baxter

Division:

Social and Economic Policy and Research

Contractor:

Ottawa University
School of Psychology
550 Cumberland Street
Ottawa, Ontario
K1N 6N5

CIDN:

1558 0100001

**VIEW FROM THE STREET -
HOUSING DOCUMENTARY
PROJECT**

Objective:

Facilitate the research and development phase of the production of the film documentary "View from the Street" in order to document the stories of the residents of Streetcity and to begin to understand the causes of homelessness and to explore methods of empowering this population.

CMHC Project Officer:

B. Baxter

Division:

Social and Economic Policy and Research

Contractor:

Close Up Film Productions
Limited
36 Springhurst Avenue
Toronto, Ontario
M6K 1B6

CIDN:

1667 0200001

Completed Reports/Rapports terminés

PARE-AIR RIGIDE.

Préparé par Mario V. Petrone. Projet réalisé dans le cadre du Programme de subventions de recherche. Ottawa : Société canadienne d'hypothèques et de logement, 1995.

Le Code national du bâtiment du Canada 1990 exige la mise en oeuvre d'un système d'étanchéité à l'air efficace pour empêcher l'infiltration et l'exfiltration d'air au travers de l'enveloppe des bâtiments. Par ailleurs, le comité associé du Code national du bâtiment a établi, comme objectif pour l'édition du CNB 1995, de réviser la section traitant de l'étanchéité à l'air afin d'y inclure des critères quantitatifs. À l'heure actuelle, on exige donc des concepteurs et constructeurs de réaliser des bâtiments étanches à l'air. D'ici peu, les concepteurs devront parfaire leurs connaissances en étanchéité à l'air afin d'être en mesure de réaliser des systèmes pare-air rencontrant certains niveaux d'étanchéité et de résistance structurale définis par le code.

Cette étude a donc pour objet de familiariser les concepteurs et les constructeurs à un système de pare-air s'appliquant aux murs de bâtiments et permettant de rencontrer efficacement les divers niveaux d'exigence du code. Ce système, appelé Pare-air rigide, est composé de panneaux rigides apposés sur les murs. Ces panneaux doivent être étanches à l'air et doivent résister aux mouvements du bâtiment ainsi qu'aux différentiels de pression entre l'intérieur et l'extérieur. Les panneaux rigides sont eux-mêmes pare-air mais les joints ne le sont pas. Un matériau différent doit donc être utilisé pour réaliser l'étanchéité des joints. Des stratégies doivent être développées afin de réaliser l'étanchéité aux joints des éléments de nature différente, telles que les fenêtres et autres systèmes.

Ce rapport propose une série de détails de construction qui décrivent les méthodes d'assemblage des différentes composantes du système pare-air rigide. Chaque série de détails est applicable à une typologie de bâtiment particulière, qu'il s'agisse de bâtiment à structure de béton, de bois ou d'acier, de rénovation ou de construction neuve.

Ongoing Projects/Projets en cours

ADJUST-A-FORM

Objective:

Test the performance of an extruded reusable aluminum form system "Adjust-A-Form" which can be used for forming strip and column concrete footings for housing.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Raymax Construction Limited
1038 Lesperance Road
Tecumseh, Ontario
N8N 1W8

CIDN:

1501 0200001

CMHC/ONHWP BUILDERS' MATERIAL DEVELOPMENT

Objective:

To revise and update 12 of the 14 CMHC Builders' Workshop Series modules and regroup them into 5 new booklets and a Trainer's Guide.

CMHC Project Officer:

T. Marshall

Division:

Technical Policy and Research Division

Contractor:

The Energy Technology Access Group
15010 Yonge Street
Aurora, Ontario
L4G 1M6

CIDN:

1364 0300001

CANADIAN WOOD-FRAME HOUSE CONSTRUCTION PUBLICATION

Objective:

The publication, "Canadian Wood-Frame House Construction", will be revised and updated to include those new technological advancements and construction techniques. The changes will also take into account the upcoming revisions which are to be included in the 1995 edition of the National Building Code as well as any additional up-to-date information on the environmental and energy concerns of today. The concept of healthy housing shall be incorporated into this publication.

CMHC Project Officers:

D. Smith
T. Marshall

Division:

Technical Policy and Research
Division

Contractor:

Habitechnica
88 Prince Arthur Avenue
Toronto, Ontario
M5R 1B6

CIDN:

1413 0300001

EARTHQUAKE RESISTANT DESIGN

Objective:

Prepare a manuscript and text, graphics and layout for a book on the seismic upgrading of housing, which will be a best practice guide for builders, renovators, architects, engineers, technologists and building officials of residential buildings under part 9 of the National Building Code.

CMHC Project Officer:

T. Marshall/D. Hazleden

Division:

Technical Policy and Research
Division

Contractor:

Pro Pacific Architecture Ltd.
2440 Alma Street
Vancouver, British Columbia
V6R 3R7

CIDN:

1355 0301001
1601 0301001

HOUSING DE-CONSTRUCTION

Objective:

To investigate and carry out a de-construction procedure on a house to make it more economically and environmentally viable compared to current housing demolition practices.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
Housing Technology Incentives
Program

Contractor:

Design Consultants
2-417 Bronson Avenue
Ottawa, Ontario
K1R 6J6

CIDN:

1439 0200001

RATIONALE FOR MASS PRODUCED BALED FIBRE HOUSING

Objective:

To develop and perfect a working prototype tool for stabilizing baled fibre walls and develop a comprehensive manual that will outline design characteristics.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
Housing Technology Incentives
Program

Contractor:

Linda Chapman
Architect
27 Third Avenue
Ottawa, Ontario
K1S 2J5

CIDN:

1502 0200001

HOUSE CONSTRUCTION/HABITATIONS -- CONSTRUCTION

Ongoing Projects/Projets en cours

SERVICEABILITY OF FLOORS BUILT WITH WOOD I - JOIST AND CONCRETE TOPPING

Objective:

Evaluate the changes in floor stiffness and vibration characteristics before and after the addition of a concrete topping to floor systems constructed with wood I - joists and a wood-based flooring.

CMHC Project Officer:

E. Dunham

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Dr. Ying Hei Chui
University of New Brunswick
Faculty of Forestry
P.O. Box 44555
Fredericton, New Brunswick
E3B 6C2

CIDN:

1651 0200001

FUTURE TRENDS IN HOUSING: ATTITUDES OF POTENTIAL HOME BUYERS TOWARDS HOUSING.

Prepared by Angus Reid Group. Prepared for Strategic Planning Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.

This background paper is intended to give a broad overview of the attitudes that potential first-time home buyers and other Canadians have towards housing and urban communities by examining their opinions about housing as an investment, and the impact of the fiscal situation, the new economy and the environment on housing decisions.

Young Canadians, like Canadians in general, believe that purchasing a house is a good investment. Over the last decade or so, the extent to which housing is seen as a good investment has diminished somewhat, with more Canadians today downgrading housing to a "somewhat good" investment. The factors that prevent or postpone renters from buying a home are primarily financial, with job insecurity, high house prices, and an overestimation of the downpayment and income necessary to buy a home and support a mortgage being the primary deterrents. Despite these barriers, almost one quarter of renters intend to buy a home in the next two years (March 1995).

Many forces are at work that could have implications for suburban expansion. On the one hand, many young urban Canadians find the idea of moving to a small community outside of an urban area appealing. At the same time, many also say that it is likely that they will move to such a rural area. Young Canadians are also quite concerned about improving the urban environment in which they presently live on several problem fronts, including water quality, air quality, and garbage disposal.

Another external force which may increase urban spread is the expanding potential to work at home for an employer in a telecommuting relationship or to run a business at home. Public opinion research suggests both are appealing options to many young Canadians. These preferences and attitudes, taken together, suggest that city suburbs may increasingly attract potential first-time home buyers.

NOTE : Aussi disponible en français sous le titre : Futures tendances en matière de logement : attitudes des propriétaires éventuels à l'égard du logement.

FUTURES TENDANCES EN MATIÈRE DE LOGEMENT : ATTITUDES DES PROPRIÉTAIRES ÉVENTUELS À L'ÉGARD DU LOGEMENT.

Préparé par Le Groupe Angus Reid. Préparé pour la Division de la planification stratégique, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1995.

Ce document donne un vaste survol de l'opinion des accédants à la propriété potentiels et des autres Canadiens sur le logement et les collectivités urbaines, en examinant leur opinion sur le logement comme investissement, l'impact de la situation fiscale, la nouvelle économie et l'environnement sur les décisions concernant le logement.

Les jeunes Canadiens, tout comme l'ensemble des Canadiens, pensent que l'achat d'une maison est un bon investissement. Cependant, cette opinion a quelque peu baisse au cours des dix dernières années, plus de Canadiens estimant en effet que le logement est un assez bon investissement. Les gens désirent certes posséder leur propre logement. Néanmoins les locataires en sont empêchés à court ou à long terme essentiellement en raison de facteurs financiers, notamment, l'insécurité de l'emploi, le prix élevé des maisons, la surestimation de la mise de fonds et du revenu nécessaire pour acheter et rembourser un prêt. Malgré tout, pres

HOUSING/LOGEMENT

d'un quart des locataires ont l'intention d'acheter un logement au cours des deux prochaines années (mars 1995).

De nombreux facteurs sont en jeu qui pourraient avoir des répercussions pour l'expansion suburbaine. D'une part, de nombreux jeunes Canadiens urbains aiment l'idée d'habiter dans une petite collectivité en dehors d'un centre urbain. Par la même occasion, ils sont nombreux à indiquer qu'ils devront probablement s'installer dans un secteur rural. Les jeunes Canadiens se préoccupent également de l'amélioration du milieu urbain dans lequel ils vivent actuellement, notamment de plusieurs problèmes, soit la qualité de l'eau, la qualité de l'air et l'enlèvement des ordures.

L'étalement urbain pourrait augmenter sous l'effet d'une autre force externe, soit la possibilité accrue de travailler à domicile pour un employeur qui dispose d'un réseau d'ordinateur ou pour travailler à son compte à la maison. La recherche en matière d'opinion publique dénote que ces deux options attirent de nombreux jeunes Canadiens. Toutes ces données suggèrent que de nombreux jeunes accédants à la propriété peuvent choisir d'acheter leur première maison dans les collectivités de banlieue.

NOTE: Also available in English under the title: *Future Trends in Housing: Attitudes of Potential Home Buyers Towards Housing.*

Ongoing Projects/Projets en cours

CANADIAN TEST OF SURVEY INSTRUMENTS AND INDICATORS OF QUALITY OF LIFE, HEALTH & WELL-BEING IN VARIOUS HOUSING ENVIRONMENTS

Objective:

To develop indicators and survey instruments which will be used to access quality of life in housing environments; to measure the impact on households of housing-based interventions and programs; to provide a standard set of instruments to assess and monitor the health and quality of life experienced by individuals and families; to better understand the contribution of housing and living environments to the quality of life experienced by individuals and families.

CMHC Project Officer:

S. Mockler

Division:

Social and Economic Policy and Research

Contractor:

University of Winnipeg
Institute of Urban Studies
346 Portage Avenue
Winnipeg, Manitoba
R3C 0C3

CIDN:

1516 0200001

THE COMMUNITY/PRIVACY TRADE-OFF IN SUPPORTIVE HOUSING: A QUALITATIVE STUDY OF CONSUMER PREFERENCES

Objective:

Undertake two qualitative research activities, focus groups and a charrette, which will encourage consumers to express their views and preferences about environments that they consider to be supportive.

CMHC Project Officer:

T. Parker

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Dr. Laura C. Johnson
Laura C. Johnson
Associates Inc.
374 Sackville Street
Toronto, Ontario
M4X 1S5

CIDN:

1647 0200001

DEVELOPING A CANADIAN HOME OWNER'S MANUAL

Objective:

To facilitate the participation of all parties interested in the development of the Canadian Home Owner's Manual in a manner that reflects each party's potential for contribution in expertise and resources.

CMHC Project Officer:

F. Grammenos

Division:

Technical Policy and Research Division

Contractor:

REID/Foster Associates
654 MacLaren Street
Ottawa, Ontario
K1R 5L2

CIDN:

1559 0200001

FUTURE ECONOMIC CONDITIONS AND THE HOUSING SECTOR

Objective:

To study the potential impacts of various scenarios of long term economic conditions, including the possibility of deflation, for the housing sector. The research will include a review of the general conditions associated with continued slow economic growth and deflationary contraction and pay special attention to the behaviour of households, the housing industry and financial institutions in such contexts. Through the development of scenarios of future economic conditions, the study will explore the implications for various components of the housing sector.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre for Future Studies in Housing and Living Environments
Experts in Residence Program

Contractor:

Nicole Morgan
377 Maple Lane
Ottawa, Ontario
K1M 1H7

CIDN:

1015 0202001

HIFE-BASED HOUSE PRICE INDEXES FOR CANADIAN CITIES AND MLS AVERAGE PRICES

Objective:

To provide an inexpensive price index showing house price change in Canadian CMA's starting in 1990; to provide evidence on the reliability of the MLS price averages as price indexes for Canadian CMA's.

CMHC Project Officer:

D. Dallaire

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Mrs. Marion Steele
Associate Professor
Department of Economics
University of Guelph
Guelph, Ontario
N1G 2W1

CIDN:

1288 0200001

PRESTON DEMONSTRATION

Objective:

To determine the viability of a self-built housing assistance option in an urban setting.

CMHC Project Officer:

J. Taggart

Division:

Social and Economic Policy and Research

Contractor:

The Nova Scotia Department of Housing and Consumer Affairs
Alderney Gate
40 Alderney Drive, 5th Floor
P.O. Box 815
Dartmouth, Nova Scotia
B2Y 3Z3

CIDN:

1011 0600001

HOUSING/LOGEMENT

ROLE OF HOUSING IN AN ENABLING SOCIETY

Objective:

Analyze and discuss the various roles housing policy can play in the context of the enabling society model. Propose various ways housing policies can be used to promote the philosophy of the enabling society while elaborating on CMHC's role in this regard.

CMHC Project Officer:

E. Nera

Division:

Social and Economic Policy and
Research

Contractor:

Ekos Research Associates
275 Sparks Street
Suite 801
Ottawa, Ontario
K1R 7X9

CIDN:

1006 0100001

HOUSING A DIVERSE SOCIETY: ACCESS AND AFFORDABILITY ISSUES FOR CANADA.

Prepared by Greg Mason, Prairie Research Associates Inc. and the Department of Economics, University of Manitoba. Prepared for Strategic Planning Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.

As our society becomes more diverse, housing must meet the needs of many varied households and individuals. Immigration, migration of Aboriginal populations to the city, a health system that is rapidly deinstitutionalizing patients and unique problems not acknowledged a decade ago, such as the need for shelters for battered women, are examples of the diversity that housing must address. A direct outcome of increased diversity in Canadian society is the problem of access and affordability of housing.

This paper examines the issue of diversity in society and how it influences housing policy. It also examines recent social and economic trends that affect affordability and access. Affordability is a complex issue. Many measures in widespread use provide a poor basis to assess whether in fact a given household or group of households is encountering a problem in securing adequate housing for an acceptable price. The use of the terms "adequate" and "acceptable" underscores the challenge in this area.

Access problems are manifested in many ways. Two of the most important instances are discrimination in rental housing and home ownership and, less apparently, regulatory bias. Few can dispute the existence of discrimination, but as U.S. research has shown, proving the existence of discrimination in mortgage markets is challenging, except in the most obvious instances. Regulatory burdens, especially those introduced by municipal regulation, can induce a range of price and cost increases in housing. Evidence in the U.S. suggests that these costs are regressive and pose access problems for low-income households.

The challenge facing housing research is to document the variations in affordability for the increasing numbers of ethnic, racial and other groups in Canada. This research must also quantify affordability problems in a more consistent and credible fashion. Important research is needed to support Aboriginal housing within the context of self-government.

NOTE : Aussi disponible en français sous le titre : *Loger une société diverse : questions d'accès et d'abordabilité pour le Canada.*

HOUSING AFFORDABILITY/LOGEMENT ABORDABLE

LOGER UNE SOCIÉTÉ DIVERSE : QUESTIONS D'ACCÈS ET L'ABORDABILITÉ POUR LE CANADA.

Préparé par Greg Mason, Prairie Research Associates Inc. et le Department of Economics, University of Manitoba. Préparé pour la Division de la planification stratégique, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1995.

Notre société devient de plus en plus diverse, et le logement doit satisfaire les besoins d'un grand nombre de ménages et d'individus différents. L'immigration, la migration des populations autochtones vers les villes, un système de santé qui vide rapidement de leurs patients les établissements de soins, et des problèmes uniques que l'on n'avouait pas il y a une décennie, comme le besoin d'abris pour les femmes victimes de violence conjugale, sont des exemples de la diversité des besoins de logement qu'il nous faut combler. Un résultat direct de la diversité accrue de la société canadienne est la difficulté de trouver un logement, et un logement abordable.

Ce mémoire examine la question de la diversité dans la société et la façon dont la diversité influence la politique du logement. Il examine également les tendances sociales et économiques récentes qui influent sur l'abordabilité et l'accès. L'abordabilité est une question complexe. Bien des méthodes de mesure communément utilisées n'offrent pas de base solide pour évaluer si, dans les faits, un ménage ou un groupe de ménages en particulier a de la difficulté à obtenir un logement convenable à un prix acceptable. Le recours à des termes comme «convenable» et «acceptable» met en évidence le défi qui se pose dans ce domaine.

Les problèmes d'accès se manifestent de diverses façons, deux des plus importantes étant, d'une part, la discrimination dans le logement locatif et dans l'accession à la propriété et, d'autre part, les obstacles moins visibles créés par la réglementation. Peu de gens peuvent mettre en doute la réalité de la discrimination, mais comme l'a démontré la recherche menée aux États-Unis, prouver qu'il y a discrimination dans les marchés hypothécaires représente tout un défi, sauf dans les cas les plus flagrants. Le fardeau de la réglementation, surtout celui qu'engendrent les règlements municipaux, peut entraîner des hausses plus ou moins importantes de prix et de coûts. Les preuves relevées aux États-Unis semblent indiquer que ces coûts sont régressifs et créent des problèmes d'accès pour les ménages à faible revenu.

Le défi que doit relever la recherche sur le logement consiste à documenter les variations de l'abordabilité pour le nombre grandissant de groupes ethniques, raciaux et autres au Canada. Les chercheurs devront aussi quantifier les problèmes d'abordabilité d'une façon plus homogène et plus crédible. Des travaux d'envergure s'imposent afin d'appuyer le logement des Autochtones dans un contexte d'autonomie.

NOTE: Also available in English under the title: *Housing a Diverse Society: Access and Affordability Issues for Canada.*

MEASURING THE EFFECTS OF MUNICIPAL REGULATIONS ON HOUSE PRICES AND RENTS.

Prepared by C. Tsurriel Somerville. Prepared for Strategic Planning Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.

Municipal regulations reduce affordability by causing prices and rents to rise or by changing the composition of units available for purchase or rent. For instance, explicit limits on residential growth increase house prices and rents by limiting supply without also dampening demand. Municipal regulations also encourage the construction and development of larger and more costly units at the expense of more affordable, higher density units. Zoning is often used to prohibit higher densities, while policies such as building codes raise the cost of developing or rehabilitating affordable units relative to that of more upscale units. All of these worsen the affordability problems of low-income renters and make the transition from renting to owning less likely.

As long as development continues, controversy and passions will continue to flare over municipal regulations. Local officials face the difficult task of balancing the needs of residents with those of landowners and others. In the face of these conditions, the concerns of all parties to the debate are best served by reforms in regulations which address the concerns of existing residents while limiting their negative side-effects, instead of by a complete rejection of government intervention.

In any effort to reform municipal regulations, local officials would be greatly aided by having access to a set of easily understood measures with which they could compare different regulatory policies. Without tools to gauge the breadth and intensity of existing regulations, successful reforms of local government regulations are impossible. Measurement instruments, generated by a detailed survey of municipal regulations in Canada would permit comparisons of policies and their effects across municipalities.

The development of accurate and useful instruments to measure the regulatory environment in Canadian cities and towns depends on the existence of consistent data which describe both the types of regulations present and the extent to which they are enforced. To obtain the underlying data, it would be necessary to survey the local officials responsible for these policies. Properly designed, it would provide qualitative descriptions of regulatory conditions and the raw information from which objective, quantitative measures can be constructed.

NOTE : Aussi disponible en français sous le titre : Mesurer les effets des règlements municipaux sur le prix des maisons et les loyers.

MESURER LES EFFETS DES RÈGLEMENTS MUNICIPAUX SUR LE PRIX DES MAISONS ET LES LOYERS.

Préparé par C. Tsurriel Somerville. Préparé pour la Division de la planification stratégique, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1995.

Les règlements municipaux réduisent l'abordabilité en faisant monter les prix et les loyers ou en modifiant la composition du parc des logements à vendre ou à louer. Ainsi, les limites explicites imposées à la croissance résidentielle augmentent le prix des maisons et les loyers en restreignant l'offre sans pour autant freiner la demande. Les règlements municipaux encouragent aussi la construction et l'aménagement de logements grands et coûteux aux dépens des logements abordables à haute densité. Le zonage sert souvent à interdire les hautes densités, tandis que des dispositions comme les codes du bâtiment augmentent le coût de production ou de remise en état des logements abordables plus que celui des logements haut de gamme. Tous ces facteurs aggravent les problèmes d'abordabilité des locataires à faible revenu et rendent moins probable le passage de l'état de locataire à celui de propriétaire.

HOUSING AFFORDABILITY/LOGEMENT ABORDABLE

Tant qu'il y aura des aménagements, la réglementation municipale suscitera controverse et passions. Les administrations doivent réaliser un délicat équilibre entre les besoins de ces résidents et ceux des propriétaires de terrains et des autres intéressés. Dans ces conditions, il est de l'intérêt de toutes les parties de rechercher une réforme de la réglementation susceptible de faire droit aux préoccupations des résidents en place tout en réduisant les effets secondaires défavorables, plutôt que de rejeter d'entrée de jeu toute intervention gouvernementale.

Dans leur tentative de réforme de la réglementation, les administrations locales bénéficieraient grandement d'un ensemble de mesures faciles à comprendre qui leur permettrait de comparer diverses politiques. Sans outils permettant de juger l'envergure et l'intensité des règlements en vigueur, toute réforme de la réglementation locale est impossible. Des instruments de mesure, générés par une enquête détaillée de la réglementation municipale permettraient de comparer les politiques et leurs effets entre les diverses municipalités.

La diversité des règlements, le cadre réglementaire et les autorités qui les imposent rendent très difficile de relever le défi d'élaborer des mesures précises de cet environnement. L'élaboration d'instruments précis et utiles du cadre réglementaire des villes canadiennes exige la mise en place d'un ensemble uniforme de données portant à la fois sur le type de règlements en vigueur et sur la mesure dans laquelle ils sont appliqués. On ne peut obtenir ces données qu'en s'adressant aux fonctionnaires locaux chargés de ces mesures. Une enquête bien conçue donnerait des descriptions qualitatives de la situation réglementaire et fournirait les données brutes à partir desquelles on pourrait élaborer des mesures quantitatives objectives.

NOTE: Also available in English under the title: *Measuring the Effects of Municipal Regulations on House Prices and Rents.*

Ongoing Projects/Projets en cours

EVALUATION OF AFFORDABILITY AND CHOICE (A.C.T.) PROGRAM

Objective:

Review the analysis plan and questionnaires drafted by CMHC and recommend improvement if needed; pretest the draft questionnaire and recommend improvement if needed.

CMHC Project Officer:

G. Murray

Division:

Program Evaluation Division

Contractor:

ABT Associates of Canada
112 Kent Street, Suite 2010A
Place de Ville, Tower "B"
Ottawa, Ontario
K1P 5P2

CIDN:

1630 0500001

MARKET ANALYSIS HOUSING AFFORDABILITY SOFTWARE PROJECT

Objective:

To produce a software program that will assist homebuyers and/or the real estate and housing industry in understanding affordability and the mortgage options available to consumers in a friendly, comprehensive and well-documented manner.

CMHC Project Officer:

D. Dall-Leblanc

Division:

Market Analysis Centre

Contractor:

AIM Technical Services
512-130 Albert Street
Ottawa, Ontario
K1P 5G4

CIDN:

1536 1000001

SHELTER AFFORDABILITY AND HOUSING NEEDS OF CANADIAN FOOD BANK CLIENTS

Objective:

Will examine the relationship between food banks and housing, and produce a profile of the typical food bank client in Winnipeg, Manitoba, in regard to shelter needs and other socio-demographic variables.

CMHC Project Officer:

J. Engeland

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Professor Jeff Sloan
Manitoba Nursing Research
Institute
Faculty of Nursing
University of Manitoba
Winnipeg, Manitoba
R3T 2N2

CIDN:

1099 0200001

SUMMARY REPORT ON MUNICIPAL REGULATORY MECHANISMS TO FACILITATE THE PRODUCTION OF AFFORDABLE HOUSING

Objective:

To undertake a background paper and presentation that will describe the use of regulatory mechanisms by municipalities to facilitate the production of affordable housing without the use of public funds.

CMHC Project Officer:

D. Scherlowski

Division:

Social and Economic Policy and
Research

Contractor:

Richard Drdla Associates
415 Wellesley Street East
Toronto, Ontario
M4X 1H5

CIDN:

1670 0200001

SYNTHESIS AND COMMUNICATION ON ACT PROGRAM

Objective:

To carry out the survey of provincial regulatory reforms which will identify, by province, what regulatory reforms have been undertaken, that can impact housing affordability and choice, both prior to and during the ACT program.

CMHC Project Officer:

B. Gray

Division:

Social and Economic Policy and
Research

Contractor:

University of Mount Allison
Rural and Small Towns
Programme
Saskville, New Brunswick
E0A 3C0

CIDN:

1571 0200001
1571 0201001

Ongoing Projects/Projets en cours

A COMPARATIVE STUDY OF IMMIGRANT HOUSING IN MONTREAL AND TORONTO

Objective:

To address the linkages between housing, neighbourhoods and social networks among visible minority immigrant groups living in metropolitan Montreal and Toronto.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Brian K. Ray
McGill University
805 Sherbrooke Street West
Montreal, Quebec
H3A 2K6

CIDN:

1283 0200001

IMMIGRANT HOUSING CHOICES, 1991

Objective:

To update and extend a recently completed study of immigrant housing choices based on 1986 census data. This study will describe differences between the housing choices of immigrants and non-immigrants in 1991 and compare findings to those of the previous study. 1986 and 1991 census data will be used to trace changes over time in the behaviour of individual immigrant cohorts. Through focus groups and statistical analysis of 1991 census data, the research will attempt to identify factors underlying observed differences between immigrants and non-immigrants.

CMHC Project Officer:

R. Lewis

Division:

Social and Economic Policy and Research

Contractor:

Lapointe Consulting Inc.
311 Markham Street
Toronto, Ontario
M6G 2K8

CIDN:

0854 0201001
0854 0200002

CADRE STRATÉGIQUE NATIONAL À L'INTENTION DES EXPORTATEURS CANADIENS DU SECTEUR DE L'HABITATION : RAPPORT DU GROUPE D'ÉTUDE FÉDÉRAL DES STRATÉGIES D'EXPORTATION RELATIVES À L'HABITATION.

Préparé pour la Société canadienne d'hypothèques et de logement, Industrie Canada, Ministère des affaires étrangères et du commerce international, le Conseil national de recherches du Canada, et Ressources naturelles Canada. Ottawa : SCHL, 1995. (PF 0180).

L'objectif général du cadre proposé dans ce document est de définir des orientations globales qui permettront au secteur canadien de l'habitation d'accroître, sur une période de dix ans, ses recettes d'exportation de même que sa part des marchés d'exportation internationaux. La démarche proposée met l'accent sur les points forts du secteur et sur les marchés d'exportation les plus prometteurs. En outre, l'orientation stratégique décrite dans le document vise à :

- fournir une orientation nationale cohérente, logique et précise en vue de la pénétration des marchés d'exportation dans le domaine de l'habitation;
- positionner favorablement le secteur canadien de l'habitation relativement aux débouchés d'exportation actuels et éventuels;
- clarifier les rôles des principaux intervenants canadiens qui participent aux activités d'exportation dans le domaine de l'habitation, notamment le secteur privé, les gouvernements et le secteur sans but lucratif;
- établir un contexte au sein duquel le gouvernement pourra offrir son soutien et ses ressources pour favoriser les exportations dans le domaine de l'habitation; et
- fournir un cadre à l'intérieur duquel on pourra élaborer des stratégies particulières aux sous-secteurs d'activité et aux marchés.

NOTE: Also available in English under the title: National Strategic Framework for Canada's Housing Exporters: Report of the Federal Housing Export Strategies Task Force.

CANADA'S EXPORTABLE HOUSING.

Ottawa: Canada Mortgage and Housing Corporation: Industry Canada, 1995. (NHA 6835).

Canadian housing technologies have been introduced in many countries over the past few decades. Canada's housing exports have included building materials, manufactured components, complete systems and turnkey production, as well as a range of expertise involved in planning, designing and building houses and managing the building process. Canada's housing exporters are also increasingly exporting expertise, products and services to improve existing dwellings. This publication endeavours to illustrate the diversity of Canada's housing technologies, products and services that are exportable, as is or adaptable to specific international requirements. It is an invitation to the foreign reader to explore what Canada's housing industry can offer in the international marketplace.

NOTE : Aussi disponible en français sous le titre : Possibilités d'exportations canadiennes dans le domaine de l'habitation; aussi disponible en chinois, en allemand, en russe, en espagnol, en japonais, et en coréen.

NOTE: Also available in French, German, Chinese, Russian, Spanish, Japanese and in Korean.

DIRECTORY OF SOURCES OF SUPPORT FOR CANADA'S HOUSING EXPORTERS.

Prepared for the Housing Export Strategies Task Force with input and assistance from Hill and Knowlton Limited. Ottawa: International Relations Division, Canada Mortgage and Housing Corporation, 1995. (PE 0181).

The purpose of this directory is to summarize federal, provincial and other Canadian programs and services that are currently available to support the international commercial endeavours of Canada's housing industry. Most of the resources identified are provided through federal departments and agencies and are related mainly to such areas as export promotion, financing, preparedness, training, market research, insurance and the provision of market intelligence and data. Additional export resources include those provided by provincial agencies responsible for export promotion and expansion, the international trade expertise that resides in Canada's academic community and in private or non-profit sector organizations focused on expanding Canadian exports.

NOTE : Aussi disponible en français sous le titre : Répertoire des sources offrant un soutien aux exportateurs canadiens du secteur de l'habitation.

NATIONAL STRATEGIC FRAMEWORK FOR CANADA'S HOUSING EXPORTERS: REPORT OF THE FEDERAL HOUSING EXPORT STRATEGIES TASK FORCE.

Prepared for Canada Mortgage and Housing Corporation, Industry Canada, Department of Foreign Affairs and International Trade, National Research Council and Natural Resources Canada. Ottawa: CMHC, 1995. (PE 0180).

The overall objective of the framework proposed in this document is to establish broad strategic directions to enable Canada's housing industry to improve its export earnings as well as its share of housing exports worldwide over a ten-year period. The approach being proposed focuses on the housing industry's export strengths and on the industry's most promising export markets. In addition, the strategic approach outlined in this paper is intended to:

- Provide a coherent, consistent and focused Canadian approach to international housing markets;
- Position Canada's housing industry favourably in relation to existing and new housing export opportunities;
- Clarify the roles of key domestic participants in Canada's housing export process, including the private sector, governments and the non-profit sector;

- Provide a context for deploying the government's housing-related export support activities and resources; and
- Provide a framework within which to develop sector- and market-specific housing export strategies.

NOTE : Aussi disponible en français sous le titre : Cadre stratégique national à l'intention des exportateurs canadiens du secteur de l'habitation : rapport du Groupe d'étude fédéral des stratégies d'exportation relatives à l'habitation.

POSSIBILITÉS D'EXPORTATIONS CANADIENNES DANS LE DOMAINE DE L'HABITATION.

Ottawa : Société canadienne d'hypothèques et de logement : Industrie Canada, 1995. (LNH 6836).

Les technologies canadiennes de l'habitation ont été adoptées par de nombreux pays au cours des dernières décennies. Les exportations du Canada dans ce secteur comprennent des matériaux de construction, des éléments préfabriqués, des systèmes complets et des opérations clés en main de même que toute une gamme de compétences dans les domaines de la planification, de la conception et de la construction d'habitations ainsi que de la gestion du processus de construction. Les exportateurs canadiens travaillant dans le secteur du logement vendent aussi de plus en plus de l'expertise, des produits et des services destinés à améliorer les logements existants. Cette publication vise à illustrer la diversité des technologies, des produits et des services canadiens dans le secteur de l'habitation susceptibles d'être exportés ou pouvant être adaptés aux exigences particulières d'autres pays. Elle invite les lecteurs étrangers à explorer ce que le secteur canadien du logement offre aux marchés internationaux.

NOTE: Also available in English under the title: Canada's Exportable Housing; also available in Chinese, German, Russian, Spanish, Japanese and Korean.

NOTE : Aussi disponible en anglais, en chinois, en allemand, en russe, en espagnol, en japonais, et en coréen.

RAPPORT DU GROUPE D'ÉTUDE FÉDÉRAL DES STRATÉGIES D'EXPORTATION RELATIVES À L'HABITATION.

Préparé pour la Société canadienne d'hypothèques et de logement; Ministère de l'industrie; Ministère des affaires étrangères et du Commerce international; Conseil national de recherches et Ministère des ressources naturelles. Ottawa : SCHL, 1994.

Le Groupe d'étude fédéral des stratégies d'exportation relatives au secteur de l'habitation a été créé au début de 1994. Il a commencé ses travaux en publiant un document de consultation par lequel il invitait le secteur canadien de l'habitation à déterminer les problèmes relatifs au commerce extérieur et à suggérer des façons de les régler. Plus de 2 500 exemplaires du document de consultation ont été distribués partout au Canada, et près de 10 p. 100 des organisations qui l'ont reçu ont répondu. De plus, environ 100 exportateurs se sont prêtés à une entrevue en profondeur, par téléphone ou en personne, et 125 autres ont participé à des réunions tenues à Vancouver, Calgary, Toronto, Montréal et Halifax.

Ce rapport résume les perceptions et les expériences dont les représentants du secteur de l'habitation ont fait part aux membres du groupe d'étude et les conseils qu'ils leur ont donnés durant la consultation qui s'est déroulée de mars à septembre 1994. Il met en évidence les opinions très répandues et censées représenter le point de vue de la majorité des entreprises du secteur de l'habitation. En somme, le rapport tente de saisir les messages essentiels exprimés durant la consultation, de les transmettre de façon concise et d'établir des bases solides sur lesquelles le groupe d'étude pourra s'appuyer pour poursuivre son travail.

NOTE: Also available in English under the title: Report of the Federal Housing Export Strategies Task Force.

HOUSING AND TRADE/LOGEMENT ET COMMERCE

RÉPERTOIRE DES SOURCES OFFRANT UN SOUTIEN AUX EXPORTATEURS CANADIENS DU SECTEUR DE L'HABITATION.

Préparé pour le Groupe d'étude des stratégies d'exportation relatives à l'habitation, avec la participation de Hill and Knowlton Limited. Ottawa : Division des relations internationales, Société canadienne d'hypothèques et de logement, 1995. (PF 0181).

Ce répertoire a pour but de renseigner sur les programmes et services qui sont actuellement offerts par le gouvernement fédéral, les provinces et d'autres organismes canadiens pour soutenir les initiatives commerciales du secteur de l'habitation sur le marché international. La plupart de ces programmes et services sont offerts par l'entremise de ministères et organismes fédéraux et se rapportent principalement à la promotion des exportations, au financement, à la préparation, à la formation, aux études de marché, à l'assurance ainsi qu'à l'information et aux données sur le marché. Parmi les autres services figurent ceux que fournissent les organismes provinciaux chargés de la promotion et de l'expansion des exportations, les experts en commerce international du milieu académique et les organismes sans but lucratif qui s'intéressent à l'expansion des exportations canadiennes en général ou des exportations vers certains pays.

NOTE: Also available in English under the title: Directory of Sources of Support for Canada's Housing Exporters.

REPORT OF THE FEDERAL HOUSING EXPORT STRATEGIES TASK FORCE.

Prepared for Canada Mortgage and Housing Corporation; Industry Canada; Department of Foreign Affairs and International Trade; National Research Council; and Natural Resources Canada. Ottawa: CMHC, 1994.

The Federal Task Force on Housing Export Strategies was established early in 1994. It commenced its work with the distribution of a consultation paper inviting all segments of Canada's housing industry to identify issues relevant to doing business internationally and to suggest ways in which these issues might be addressed. Over 2,500 copies of the paper were distributed across Canada and close to 10% of those who received it responded. In addition, approximately 100 industry exporters were interviewed in depth by telephone or in person and another 125 participated in meetings held in Vancouver, Calgary, Toronto, Montreal and Halifax.

This report summarizes the perceptions, experiences and advice that were provided to the Task Force by representatives of the industry during the consultation that took place between March and September, 1994. It focuses on views that received widespread support and are considered to represent the opinions of a majority of firms in the industry. In sum, the report endeavours to capture the key messages that were expressed during the consultation and to convey this information in a form that is concise, to the point and a sound basis for follow-up by the Task Force.

NOTE : Aussi disponible en français sous le titre : Rapport du Groupe d'étude fédéral des stratégies d'exportation relatives à l'habitation.

CANADA'S HOUSING EXPORT EXPERIENCE AND PROSPECTS

Objective:

Production of the information needed to ascertain the housing industry's prospects for being designated an export priority sector; examination of the results obtained from specific activities which might be undertaken to support its exports.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

The Bayswater Consulting Group Inc.
82 Bayswater Avenue
Ottawa, Ontario
K1Y 2E9

CIDN:

1523 0900001

DEVELOPMENT OF A HOUSING MARKET STUDY IN CHINA

Objective:

To develop a housing market study that can be utilized by the Canadian housing industry to pursue the commercial opportunities in China and provide housing exporters with guidelines and a strategy for operating in China.

CMHC Project Officer:

A. Lucciola

Division:

International Relations Division

Contractor:

The Delta Partners
32 Burrows Road
Ottawa, Ontario
K1J 6E6

CIDN:

1433 0900005

DEVELOPMENT OF A RESEARCH METHODOLOGY FOR THE PROPOSED HOUSING MARKET STUDY IN CHINA

Objective:

To develop a methodology that can be used to research and represent in publishable form Canada's capacity to: pursue the commercial opportunities in China for the Canadian housing industry; and provide housing exporters with guidelines and a strategy for operating in China.

CMHC Project Officer:

A. Lucciola

Division:

International Relations Division

Contractor:

Chreod Limited
Suite 200
111 Sparks Street
Ottawa, Ontario
K1P 5B5

CIDN:

1433 0900003

COMPETITION FOR GLOBAL HOUSING MARKETS

Objective:

To examine the housing export capabilities of Canada's principal competitors in international housing markets as well as the strategic approaches that these countries use to do business internationally.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

Scanada Consultants Limited
446 Reynolds Street
Oakville, Ontario
L6J 3M4

CIDN:

1369 0900001

GUIDE TO BECOMING HOUSING EXPORT READY

Objective:

To help potential housing exporters to self-assess their degree of export readiness; identify impediments to their being, or becoming export ready; and identify resources that will assist in overcoming impediments to becoming export ready.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

Pervit International
505 Westminster Avenue
Ottawa, Ontario
K2A 2T9

CIDN:

1547 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN CENTRAL AND EASTERN EUROPE

Objectives:

To identify, measure, analyse and evaluate housing export opportunities for Canadians in Central and Eastern Europe.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

The Canadian Urban Institute
30 St. Patrick Street
6th Floor
Toronto, Ontario
M5T 3A3

CIDN:

1580 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN LATIN AMERICA

Objectives:

To prepare a study to give depth to the sparse information and analysis that currently is available about Latin American housing markets and market opportunities as well as Canada's capacity to address these opportunities.

CMHC Project Officer:

L. Marti-Aguilar

Division:

International Relations Division

Contractor:

Holmen Enterprises Limited
8449-118 Street
Edmonton, Alberta
T6G 1T2

CIDN:

1563 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN MAINLAND ASIA AND THE PACIFIC RIM

Objective:

To carry out research on mainland Asia (excluding China) which will identify, measure, analyse and evaluate housing export opportunities for Canadians.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

Hickling Corporation
350 Sparks Street
6th Floor
Ottawa, Ontario
K1R 7S8

CIDN:

1565 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN THE MIDDLE EAST

Objective:

Carry out a study to identify, measure, analyse and evaluate housing export opportunities for Canadians in the Middle East.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

Nordicity Group Ltd.
280 Albert Street
10th Floor
Ottawa, Ontario
K1P 5G8

CIDN:

1608 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN WESTERN EUROPE

Objective:

To identify, measure, analyse and evaluate housing export opportunities for Canadians in Western Europe.

CMHC Project Officer:

C. McCallum

Division:

International Relations Division

Contractor:

Trema Gestion Conseil Inc.
10160 avenue St-Charles
Montreal, Quebec
H2C 2L4

CIDN:

1564 0900

HOUSING EXPORT OPPORTUNITIES FOR THE U.S.A.

Objective:

To identify, measure, analyse and evaluate housing export opportunities for Canadians in the United States.

CMHC Project Officer:

P. Spurr

Division:

International Relations Division

Contractor:

Centre for International Business Studies
École des hautes études commerciales
5255 Decelles Avenue
Montreal, Quebec
H3T 1V6

CIDN:

1504 0900

**HOUSING EXPORT
WEB SITE**

Objective:

To carry out a feasibility study for the establishment of a housing export web site at CMHC.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

Perwit International
505 Westminster Avenue
Ottawa, Ontario
K2A 2T9

CIDN:

1672 0900001

**PROJECT DEFINITION
AND PRELIMINARY
FEASIBILITY ASSESSMENT
OF THE SHANGHAI LOW
COST HOUSING
DEMONSTRATION PROJECT**

Objective:

The consultant will participate as a member of the CMHC-led team travelling to China to undertake consultations with the Chinese. The findings of the mission will be summarized in a report for presentation to the industry. The report will provide details on the parameters of the project, will undertake a preliminary feasibility assessment, and will present possible options for implementation by Team Canada.

CMHC Project Officer:

P. Burr

Division:

International Relations Division

Contractor:

Chreod Ltd.
111 Sparks Street
Suite 200
Ottawa, Ontario
K1P 5B5

CIDN:

1673 0900001

Ongoing Projects/Projets en cours

HABITATION ET FLEXIBILITÉ AU CANADA : BILAN 1991

Objet :

Construire une grille d'analyse permettant de dresser une typologie des solutions apportées par les architectes; et faire un rapport de synthèse proposant un bilan global des perspectives de résolution du problème de flexibilité dans un projet d'habitation.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Annie Chelin
5780, rue Hutchison
Outremont (Québec)
H2V 4B6

NIC :

0911 0200001

HABITATIONS NOUVELLES EN MILIEU ANCIEN

Objet :

La recherche porte sur les problèmes de design que posent l'implantation et l'intégration de nouvelles habitations dans les milieux résidentiels canadiens de facture plus ou moins homogène ou dans leurs zones limitrophes. Par extension, elle s'intéresse à toute opération de construction nouvelle en milieu ancien, qu'il s'agisse de recyclages, de rénovations ou d'agrandissements.

Agent de projet pour la SCHL :

M. Desbiens

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Pierre-Richard Bisson
Université de Montréal
Case Postale 6128
Succursale Centre-ville
Montréal (Québec)
H3C 3J7

NIC :

1450 0200001

LE LOGEMENT CONTIGU REPENSÉ DANS SES ÉLÉMENTS

Objet :

Ce projet de recherche porte sur l'analyse des composantes, des éléments structurants de base, du logement dit "contigu".

Agent de projet pour la SCHL :

F. Grammenos

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Monsieur Richard De La Riva
Affleck, De La Riva Architectes
1030 St-Alexandre
Bureau 410
Montréal (Québec)
H2Z 1P3

NIC :

1645 0200001

MONTRÉAL : UNE GRANDE TRADITION D'HABITAT À DENSITÉ MOYENNE

Objet :

Ce projet veut mettre en lumière les processus d'adaptation du logement et des types de bâtiments à travers les diverses phases de l'évolution des formules "plex" (duplex, triplex, quatre-plex, cinq-plex ...) à Montréal au cours de quatre cycles de constructions entre 1866 et 1935.

Agent de projet pour la SCHL :

M. Desbiens

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

David B. Hanna
Université du Québec à Montréal
Case postale 8888
Succursale Centre-ville
Montréal (Québec)
H3C 3P8

NIC :

1455 0200001

PASSIVE SOLAR HOUSE DESIGNS FOR CANADA

Objective:

To identify relevant literature and design tools, analyze and interpret data in order to update the existing CMHC publication on passive solar house designs.

CMHC Project Officer:

F. Grammenos

Division:

Technical Policy and Research
Division

Contractor:

Leslie Jones & Associates Ltd.
319 Catherine Street
Ottawa, Ontario
K1R 5T4

CIDN:

1241 0200001

RESIDENTIAL STREET DESIGN: LEARNING FROM SUBURBIA

Objective:

To generate concrete design solutions based upon a thorough understanding of precedents, and introduce and stimulate new ideas for land developers and design professionals.

CMHC Project Officer:

F. Grammenos

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Mr. Sevag Pogharian
Sevag Pogharian Design (SPD)
4643 Sherbrooke Street West
Suite 12
Westmount, Quebec
H3Z 1G2

CIDN:

1644 0200001

VILLE ST-LAURENT REVISITED: WARTIME HOUSING AND ARCHITECTURAL CHANGE, 1942-92

Objective:

To study a solution offered by the wartime housing effort and to test its lessons for today's housing problems.

CMHC Project Officer:

F. Grammenos

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Dr. Annmarie Adams
School of Architecture
McGill University
815 Sherbrooke Street West
Montreal, Quebec
H3A 2K6

CIDN:

1083 0200001

VIRTUAL REALITY AND ITS POTENTIAL USES IN THE HOUSING SECTOR

Objective:

To assess potential opportunities to apply virtual reality technology in Canadian urban planning and the housing sector. Particular attention will be given to the potential use of virtual reality in designing sustainable communities and accessible housing for the disabled and seniors. The final report will provide an overview of virtual reality technology and discuss examples of existing applications relevant to housing and urban development.

CMHC Project Officer:

D. Leong

Division:

Social and Economic Policy and
Research
Centre for Future Studies in
Housing and Living
Environments
Experts in Residence Program

Contractor:

John Thurston
26 Standford Private
Ottawa, Ontario
K1T 3J3

CIDN:

1015 0202003

HOUSING FORECASTING AND DEMAND/ PRÉVISION ET DEMANDE DE LOGEMENTS

Ongoing Projects/Projets en cours

CHILDREN LIVING IN TWO HOMES: JOINT CUSTODY AND DUAL RESIDENCES

Objective:

Through a literature review and a survey of families, this study will examine the overall magnitude and possible longer term implications of joint custody agreements for housing demand and the use and design of dwellings.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research

Centre for Future Studies in Housing and Living Environments

Experts in Residence Program

Contractor:

Mr. Martin Wexler
45, rue Chesterfield
Westmount, Quebec
H3Y 2M4

CIDN:

1015 0201001

GENDER DIFFERENCES IN HOUSING DEMAND

Objective:

The study will identify and measure the difference in housing demand by men and women. The objective guiding the research plan is the search for the unique effects of changing employment and income opportunities for women on the housing behaviour. The work will involve "potential" as well as "permanent" income indexes by age group.

CMHC Project Officer:

T. Mitchell

Division:

Social and Economic Policy and Research

External Research Program

Contractor:

Andrejs Skaburskis
School of Urban and Regional Planning
Queen's University
Kingston, Ontario
K7L 3N6

CIDN:

1465 0200001

ALTERNATIVE CONSTANT-QUALITY PRICE INDEXES FOR MODEST HOUSES AND CONDOMINIUMS IN KITCHENER-WATERLOO.

Prepared by Richard Goy and Marion Steele. Ottawa: Canada Mortgage and Housing Corporation, 1994. (External Research Program).

Quality-adjusted price indexes for modestly priced houses, condominiums and "starter" homes are needed for the construction of home ownership affordability indexes for renters and for accurate information about market price cycles. This study estimates an array of price indexes for this purpose.

The basic statistical method used for most of the indexes estimated by this study is hedonic regression. Flexible relative price indexes, which allow the relative price of house characteristics to vary over time, are estimated, as are fixed relative price indexes, which assume that the prices of all characteristics change at the same rate. Also estimated are repeat sales indexes. These are not based on a hedonic regression but on a simple regression run on the prices of only those properties trading twice within the period. Roughly, this method takes the quality-adjusted price change as equal to the percentage change in the price of a property, averaged over all properties selling twice. The repeat sales method implicitly assumes that all properties change in price at the same rate.

The hedonic-based indexes are estimated separately for all houses, condominiums and starter homes. The data are Multiple Listing Service data for Kitchener-Waterloo for 1988 to 1990. The most striking result is the strong similarity among the estimated indexes. For example, all indexes for houses and condominiums reach their peak in the first quarter of 1990. It is noteworthy that the repeat sales indexes show a higher peak than other indexes.

For this city, for this period, the MLS Average generally tracks the quality adjusted starter home indexes closely, although it is somewhat higher in early quarters. The NHA average for existing houses also tracks estimated indexes well, overall, for houses (but not for condominiums) except that it reaches a later and higher peak. The Royal LePage price for a standard bungalow misses the peak but ends the period at a level quite similar to the estimated indexes. Statistics Canada's New House Price Index substantially undershoots the hedonic index for new houses estimated in this study.

COMPOSITION DU PANIER RÉSIDENTIEL ET SEGMENTATION DU MARCHÉ : LE CAS DE QUÉBEC.

Préparé par François Des Rosiers. Ottawa : Société canadienne d'hypothèques et de logement, 1992, c.-à-d., 1995. (Programme de subventions de recherche).

Cette recherche consiste en une analyse comparative des similitudes et des différences entre les différents produits résidentiels et les sous-marchés sur le territoire de la Communauté urbaine de Québec (CUQ), en matière d'évaluation des valeurs des propriétés résidentielles. Par une approche économétrique, soit une méthode statistique appliquée au phénomène économique, cette recherche a pu déterminer avec précision, en premier lieu, la contribution de chacun des attributs des propriétés résidentielles à leur valeur sur le marché, et en deuxième lieu, les éléments qui différencient les sous-marchés sur le territoire de la CUQ. Ainsi, par exemple, les résultats ont démontré qu'une salle de bain, un foyer, un abri d'auto et une piscine rajoutent respectivement 6,9 %, 6,0 %, 6,1 % et 8,7 % à la valeur d'une résidence à Québec. La contribution de l'abri d'auto à la valeur des propriétés est plus importante dans les produits et les sous-marchés de bas de gamme que dans les produits et les sous-marchés de haut de gamme. L'inverse est vrai dans le cas des garages de voiture.

HOUSING MARKET/MARCHÉ DE L'HABITATION

Ces résultats semblent confirmer non seulement la théorie économique sur les différents types de biens à la consommation, mais aussi la pratique en évaluation. Les aménités de luxe (garage) ou les «biens supérieurs» en théorie économique ont plus de valeur dans les quartiers résidentiels riches que dans les secteurs moins bien nantis. Par ailleurs, cette recherche a pu également introduire des facteurs, tels la taxe municipale, le voisinage et la proximité des services, comme variables explicatives à la valeur des propriétés résidentielles. Les résultats de cette étude ont aussi démontré que l'approche «hédonique», qui consiste à déterminer, par analyse économétrique, la contribution marginale de chacun des attributs résidentiels à la valeur marchande des propriétés, ne donne des résultats intéressants que dans un marché relativement homogène. Elle perd de précision pour les marchés hétérogènes, composés d'une multitude de produits et de secteurs différents.

NOTE: Also available in English under the title: *Residential Basket Mix and Market Segmentation: The Quebec Case*.

DEMOGRAPHIC CHANGE AND THE HOUSING MARKET IN CANADA.

Prepared by Arthur Hosios and George Fallis. Ottawa: Canada Mortgage and Housing Corporation, 1995. (External Research Program).

Reviews of empirical research on household formation and tenure choice in this report confirm that, at individual and aggregate levels, these decisions are responsive to changes in the economic environment in the manner predicted by economic theory. That is, headship rates and ownership propensities respond positively to income and negatively to housing prices. To account for the impact of changes in the economic environment on household formation and tenure choice, a technique is developed for projecting headship rates and ownership propensities, by household type and age group, on the basis of expected future changes in incomes, prices, rents and mortgage interest rates.

The two ingredients required to make projections of headship rates and ownership propensities for Canada by household type and age group are the following ones:

- i) Estimated headship rate and ownership propensity functions for family and non-family households, with heads in different age groups;
- ii) Forecasts of per capita income, mortgage interest rates and price inflation, as well as forecasts of markets, rents and house prices.

The results confirm that income and rent are important determinants of household formation and tenure choice, especially for non-family households. Using current projections for income and rent, the report shows that projections of housing demand which ignore possible income-rents effects may differ from those which take them into account by as much as 20-30%.

THE HEDONIC APPROACH AND THE RENTAL MARKET: AN APPLICATION TO THE QUEBEC REGION.

Prepared by François Des Rosiers. Ottawa: Canada Mortgage and Housing Corporation, 1994. (External Research Program).

Over the last twenty years or so, hedonic modeling applied to urban residential markets has been widely used in the United States and abroad for mass appraisal purposes. While data availability constraints have led researchers to focus mainly on owner-occupied houses, the income-property segment of the residential market has undergone several investigations in recent years. This document summarizes the findings of recent research on the structure of the rental market in the Quebec area for the 1989-92 period. It focuses on five spatial submarkets of the Quebec region, namely Quebec City, Vanier, Ste-Foy, Beauport and Charlesbourg, which form the central urban core of the Quebec Urban Community (QUC). The data bank was made available by the Appraisal Division of the QUC and consists of information obtained from property owners via a systematic survey which covers some 70 to 75 percent of the rental stock in selected municipalities of the region. Some 32,000 rental units and nearly 3,300 buildings are included in the study. The data bank provides detailed information on building and apartment size, age, location, services provided, quality of premises and type of occupants; vacancy rates can also be derived from the bank. In addition, resorting to a regional geographic information system permits neighbourhood effects to be integrated into the analysis.

In the first part of the paper, the Charlesbourg rental market as of 1991 is analyzed. Three submarkets are determined on the basis of average neighbourhood rent, unit size and building density. The study confirms Smith and Kroll's conclusions that implicit prices of rental attributes are significantly distinct across submarkets: while some attributes produce relatively constant implicit prices, others tend to vary with unit size, building structure and tenants' profile. In the second part of the paper, spatial segmentation and collinearity issues are emphasized. Using a regression-based paired comparison approach, stable hedonic prices are determined for main rental services at a regional level. Service-adjusted, local equations are then developed. Good overall performances are obtained, with most individual coefficients emerging as both consistent in sign and magnitude and which exhibit a high statistical significance.

Ongoing Projects/Projets en cours

ÉVOLUTION DE LA DEMANDE DE LOGEMENT ET STABILITÉ DES PRIX IMPLICITES DES ATTRIBUTS RÉSIDENTIELS; UNE COMPARAISON 1986-1991

Objet :

La recherche consiste à étudier les modifications survenues entre 1986 et 1991 dans la structure de la demande de logement des ménages de la région de Québec. Le modèle hédonique «RÉSIVALU», mis au point il y a quelques années, a permis de tracer un portrait détaillé des préférences des ménages en matière de logement pour la période 1986-1987, et ce pour l'ensemble des sous-marchés de

propriétaires- occupants sur le territoire de la Communauté urbaine de Québec (CUQ). Cette étude aura recours à un système d'information géographique en voie d'élaboration pour le territoire de la CUQ qui s'intégrera au modèle hédonique RÉSIVALU à régression multiple. Elle comparera la carte des préférences des ménages de 1986 à celle de 1991 et examinera les changements qui ont marqué les prix implicites des attributs des prix des maisons. L'étude permettra en outre de mesurer les déplacements fiscaux entre municipalités de la CUQ, les modifications des structures socio-économiques ainsi que l'étalement urbain.

Agent de projet pour la SCHL :

J.F. Dion

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

François Des Rosiers
Professeur titulaire
Université Laval
Faculté des sciences de
l'administration
Sainte-Foy (Québec)
G1K 7P4

NIC :

1275 0200001

HOUSING MARKET/MARCHÉ DE L'HABITATION

MATCHING BUYERS AND SELLERS IN THE RESALE HOUSING MARKET

Objective:

Matching buyers and sellers in
the resale housing market.

CMHC Project Officer:

P. White

Division:

Social and Economic Policy and
Research

External Research Program

Contractor:

Mr. Christopher T. Ragan
Department of Economics

McGill University
855 Sherbrooke Street West
Montreal, Quebec
H3A 2T7

CIDN:

1098 0200001

HOUSING RESEARCH/RECHERCHE EN LOGEMENT

INVENTORY OF RESEARCH AND INFORMATION PRODUCTS OF MEMBERS OF THE NATIONAL HOUSING RESEARCH COMMITTEE

Objective:

To develop a computerized inventory of research and information products of members of the National Housing Research Committee to facilitate access to information on ongoing and planned housing research activities in Canada.

CMHC Project Officer:

T. McGregor

Division:

Strategic Planning Division

Contractor:

Scanada Consultants Limited
446 Reynolds Street
Oakville, Ontario
L6J 3M4

CIDN:

1238 0200001
1238 0201001

SYMPOSIUM INTERNATIONAL RELATIF AUX ENQUÊTES SUR L'HABITATION

Objet :

D'évaluer les tendances passées et actuelles en ce qui a trait aux enquêtes sur l'habitation et de trouver de nouvelles théories et méthodes.

Agent de projet pour la SCHL :

J. Angus

Division :

Politiques et recherche sociales
et économiques

Contractant :

Université de Laval
Québec (Québec)
G1K 7P4

NIC :

1493 0200001

Ongoing Projects/Projets en cours

HOME AND PROPERTY PROTECTION VIDEO

Objective:

To produce a video that gives the general public information on home and property security.

CMHC Project Officer:

P. Archer

Division:

Technical Policy and Research Division

Contractor:

Royal Canadian Mounted Police
1200 Vanier Parkway
Ottawa, Ontario
K1A 0R2

CIDN:

1609 0300002

HOUSING RELATED SAFETY AND SECURITY STANDARDS

Objective:

To identify the work being done by key players both nationally and internationally who have been involved in the development of housing-related safety and security standards based on 'crime prevention through environmental design' (CPTED) principles and to produce a synopsis of this work done over the last 10 years. The final report will include a literature review and the results of a survey of CPTED practitioners.

CMHC Project Officer:

J. Taggart

Division:

Social and Economic Policy and Research

Contractor:

B.C. Coalition for Safer Communities & Secure Design
C/O The People's Law School
150-900 Howe Street
Vancouver, British Columbia
V2Z 2M4

CIDN:

1299 0100002

THE PREVENTION OF CRIME

Objective:

To harness internationally the know-how to improve the quality of life in and around housing communities by reducing crime and violence; and to prepare documentation on the most promising approaches for dissemination within Canada.

CMHC Project Officer:

J. Taggart

Division:

Social and Economic Policy and Research

Contractor:

International Centre for the Prevention of Crime
380 Saint-Antoine Avenue West
Office 3200
Montreal, Quebec
H2Y 3X7

CIDN:

1506 0100001

SAFETY AUDIT KIT AND DEMONSTRATION RESEARCH PROJECT

Objective:

To develop and process for delivery the safety audit kit demonstration research project.

CMHC Project Officer:

B. Baxter

Division:

Social and Economic Policy and Research

Contractor:

University of Mount Allison
Rural and Small Town Programme
Sackville, New Brunswick
E0A 3C0

CIDN:

1545 0100001

SÉCURITÉ URBAINE, PRÉVENTION DE LA CRIMINALITÉ ET INTERVENTIONS EN HABITATION DANS LES QUARTIERS MONTRÉALAIS

Objet :

La présente a pour but de vous confirmer l'engagement de la SCHL à financer un projet de la SHDM intitulé Sécurité urbaine, prévention de la criminalité et interventions en habitation dans les quartiers montréalais.

Agent de projet pour la SCHL :

B. Baxter

Division :

Politiques et recherche sociales et économiques

Contractant :

Société d'habitation du Québec
Direction générale de la planification et de la recherche
1054 rue Conroy
Québec (Québec)
G1R 5E7

NIC :

1411 0100001

HUMAN SETTLEMENTS/ÉTABLISSEMENTS HUMAINS

Ongoing Projects/Projets en cours

VANCOUVER COLLOQUIUM

Objective:

To produce proceedings from the colloquium on "The Road to Istanbul: From Habitat I to Habitat II", being held in Vancouver from October 26 to 28, 1995.

CMHC Project Officer:

J. Smugler

Division:

International Relations Division

Contractor:

Simon Fraser University
Burnaby, British Columbia
V5A 1S6

CIDN:

1520 0900001

Completed Reports/Rapports terminés

PARTENARIATS PUBLICS-PRIVÉS EN INFRASTRUCTURES MUNICIPALES : THÉORIE ET PRATIQUE.

Préparé par IBI Group. Préparé pour la Division de la recherche, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1995.

Comme les déficits gouvernementaux croissent, on examine une variété de démarches pour réduire les dépenses gouvernementales. Une méthode pour y parvenir est de faire participer le secteur privé dans des partenariats avec le gouvernement pour la prestation de services. Cette étude examine les différents modèles de partenariats publics-privés, évalue leurs points forts et points faibles, et examine un certain nombre de cas particuliers.

Trois partenariats entre des conseils scolaires et des municipalités ont été examinés. Dans plusieurs cas, des sociétés privées ont assumé le financement de l'infrastructure publique. D'autres études de cas portaient sur le fonctionnement d'usines de traitement de l'eau et des eaux usées, de nouveaux règlements concernant la gestion et la cueillette des déchets, et l'exploitation du tunnel Windsor-Detroit.

Dans le rapport, on a conclu que le secteur privé pouvait être plus efficace que le gouvernement à cause de la compétitivité, la rapidité du processus de prise de décisions et la souplesse d'organisation. Le secteur privé jouissait aussi d'autres avantages découlant de sa capacité à utiliser les permissions de zonage sur les terrains appartenant au secteur public et de sa capacité à refiler les coûts aux acheteurs de maisons. Les inconvénients des partenariats comprennent le temps nécessaire pour négocier les contrats, la détermination d'un taux de rendement au secteur privé qui soit politiquement acceptable eu égard au risque couru, le besoin de délimiter clairement les responsabilités, les niveaux de service et les barèmes de tarifs, ainsi que pour s'assurer d'un entretien adéquat des installations qui seront éventuellement remises au gouvernement.

NOTE: Also available in English under the title: *Public-Private Partnerships in Municipal Infrastructure: Theory and Practice.*

PUBLIC-PRIVATE PARTNERSHIPS IN MUNICIPAL INFRASTRUCTURE: THEORY AND PRACTICE.

Prepared by IBI Group. Prepared for Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.

As government deficits increase, a variety of approaches are being explored to reduce government expenditures. One technique is to involve the private sector in partnerships with government in the provision of services. This study examines the different models of public-private partnership, assesses their strengths and weaknesses, and reviews a number of specific case studies.

Partnerships between school boards and municipalities were reviewed in three municipalities. In several cases, private firms were responsible for financing public infrastructure. Other case studies dealt with the operation of water and sewage treatment plants, garbage collection, new regulations regarding waste management and the operation of the Windsor-Detroit tunnel.

The report concluded that the private sector may be more efficient than government because of its competitiveness, speed of decision making and flexibility of organization. Other benefits from private sector involvement arise from the ability of the private sector to utilize zoning permissions on publicly-owned land and the ability to pass on costs to home buyers. Difficulties with partnerships include the time required to negotiate contracts, the determination of a private rate of return which is politically acceptable and which also reflects the risk involved, the need to clearly define responsibilities, service levels and fee rates as well as the need to ensure that adequate maintenance takes place on facilities that are to be returned to government operations.

NOTE : Aussi disponible en français sous le titre : *Partenariats publics-privés en infrastructures municipales : théorie et pratique.*

Ongoing Projects/Projets en cours

FINANCING OF INFRASTRUCTURE AND LOCAL SERVICES

Objective:

To carry out a study on the state of research in financing of infrastructure and local services, and on the information needs of organizations involved in the area.

CMHC Project Officer:

D. Myette

Division:

Social and Economic Policy and Research

Contractor:

Enid Slack Consulting Inc.
214 King Street West
Suite 318
Toronto, Ontario
M5H 3S6

CIDN:

1566 0200001

MUNICIPAL MAINTENANCE AND REHABILITATION PRACTICES AND THE CONDITION OF THE INFRASTRUCTURE

Objective:

To examine the following issue: is there a link between organizational structure and the use and application of sound maintenance and rehabilitation practices and thereby, the condition of municipal infrastructure.

CMHC Project Officer:

D. Myette

Division:

Social and Economic Policy and Research

Contractor:

University of Winnipeg
Institute of Urban Studies
346 Portage Avenue
Winnipeg, Manitoba
R3C 0C3

CIDN:

1528 0200001

Ongoing Projects/Projets en cours

**DEVELOPMENT OF
COMMERCIALLY VIABLE
CONCEPTS AND A DESIGN
FOR A RESIDENTIAL
FRAMING SYSTEM FOR A
MONOCOQUE HOUSE**

Objective:

The development of commercially viable engineered structural concepts and a design for a monocoque framing system for residential structures which can be adopted by home builders for the construction of houses on unstable soils; monitoring of the demonstration of the system in a house construction project and a report of the results of the work for CMHC.

CMHC Project Officer:

R. Duncan

Division:

Technical Policy and Research
Division

Contractor:

Gower, Yeung & Associates
Ltd.
615 Eighth Street
Suite 201
New Westminster, British
Columbia
V3M 3S3

CIDN:

0657 0300001

**THREE DECADES OF
INNOVATION IN HOUSING
TECHNOLOGY**

Objective:

Prepare a manuscript to document and illustrate the evolution of Canadian housing technology, design and planning during the period 1966-1996, to complement the publication "Two Decades of Innovation in Housing Technology 1946-1965" prepared in 1994.

CMHC Project Officer:

P. Archer

Division:

Technical Policy and Research
Division

Contractor:

Scanada Consultants Ltd.
436 MacLaren Street
Ottawa, Ontario
K2P 0M8

CIDN:

1418 0300001

ASSESSMENT OF THE CAPACITY TO USE STOCHASTIC MODELS IN BUILDING LIFE-CYCLE COSTING

Objective:

The study is an evaluation of how well easily collected, financial data reported on audited statements and supporting documentation about housing that is targeted towards low and moderate income households can be used in conjunction with well known probabilistic models to estimate long term maintenance, repair and replacement costs.

CMHC Project Officer:

W. Webster

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Aron Spector
Ark Research Associates
165 Hinton Avenue North
Ottawa, Ontario
K1Y 0Z9

CIDN:

1100 0200001

MANUFACTURED HOUSING/HABITATIONS USINÉES

Ongoing Projects/Projets en cours

A STRUCTURAL ANALYSIS OF THE CANADIAN AND INTERNATIONAL MANUFACTURED HOUSING INDUSTRY

Objective:

To enhance the international
competitiveness of the Canadian
manufactured housing industry.

CMHC Project Officer:

T. McGregor

Division:

Strategic Planning Division

Contractor:

Canadian Manufactured Housing
Association
150 Laurier Avenue West
Suite 200
Ottawa, Ontario
K1P 5J4

CIDN:

1290 0200001

ICE DAMMING FIELD RESEARCH

Objective:

To select a sample of new Ottawa houses that suffered ice damming and an equal number of new houses that did not and by inspection explain the incidence of ice dammings.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research Division

Contractors:

Rosemary Spencer
1358 Kingston Avenue
Ottawa, Ontario
K1Z 8L2

Scanada Consultants Ltd.
436 MacLaren Street
Ottawa, Ontario
K2P 0M8

CIDN:

1662 0300002
1662 0300003

MOISTURE IN BASEMENT WALLS INSULATED ON THE INSIDE

Objective:

To investigate the critical design parameters for the control of moisture in basement walls insulated on the inside.

CMHC Project Officer:

J. Robar

Division:

Technical Policy and Research Division

Contractor:

National Research Council of Canada
Institute for Research in Construction
1200 Montreal Road
Ottawa, Ontario
K1A 0P7

CIDN:

1421 0200001

MOISTURE, MOULD, YOUR HOUSE AND YOU PUBLICATION

Objective:

Review the backgrounder and other resource materials. Assemble and convene a focus group of possible consumer users, to determine the best format, style and content of the publication. Finalize the audience profile and outline for the publication. Develop and edit the manuscript.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research Division

Contractor:

Scanada Consultants Limited
436 MacLaren Street
Ottawa, Ontario
K2P 0M8

CIDN:

1030 0200001

MOISTURE PROBLEMS IN FINISHED BASEMENTS

Objective:

To establish the incidence of finished basements with moisture problems, mould, or material degradation; finishing techniques or house types that seem immune to such problems; and typical wood stud moisture levels.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research Division

Contractor:

Scanada Consultants Limited
436 MacLaren Street
Ottawa, Ontario
K2P 0M8

CIDN:

1386 0200004

PROTECTING GYPSUM SHEATHING IN INSULATED STEEL-STUD WALLS

Objective:

To determine which types of wall arrangements perform the best with respect to moisture control under similar boundary conditions.

CMHC Project Officer:

J. Rousseau

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Dr. Kim Pressnail
Assistant Professor
Dept. of Civil Engineering
University of Toronto
35 St. George Street
Toronto, Ontario
M5S 1A4

CIDN:

1282 0200001

MORTGAGES AND HOUSING FINANCE/ HYPOTHÈQUES ET LOGEMENT -- FINANCES

Ongoing Projects/Projets en cours

THE OPTIMAL MORTGAGE TERM SELECTION

Objective:

To conduct a study that will identify the conditions under which mortgagors can reasonably choose a mortgage term that minimizes interest costs.

CMHC Project Officer:

M. Pellerin

Division:

Market Analysis Centre

Contractor:

Mary McDonough Research
Associates
151 Yonge Street
Suite 1210
P.O. Box 7
Toronto, Ontario
M5C 2W7

CIDN:

1525 1000001

MUNICIPAL GOVERNMENT AND FINANCE/ ADMINISTRATION MUNICIPALE ET FINANCES

Ongoing Projects/Projets en cours

HANDBOOK ON MUNICIPAL ENVIRONMENTAL PRICING

Objective:

To produce the ICLEI handbook on municipal environmental pricing which will provide a blueprint for reforming municipal economic instruments.

CMHC Project Officer:

J. Smugler

Division:

International Relations Division

Contractor:

International Council for Local
Environmental Initiatives
City Hall, East Tower
8th Floor
Toronto, Ontario
M5H 2N2

CIDN:

1252 0900001

Completed Reports/Rapports terminés

INUIT WOMEN: THE HOUSING CRISIS AND VIOLENCE.

Prepared by Pauktuutit Women's Association. Prepared for Strategic Planning Division, Canada Mortgage and Housing Corporation. Ottawa: The Association, 1995.

NOTE: Available from: Pauktuutit Inuit Women's Association of Canada
192 Bank Street
Ottawa ON K2P 1W8
Tel.: (613) 238-3977
Fax: (613) 238-1787

This report discusses the housing crisis in Inuit communities and its impacts upon women who are victims of violence. Housing shortages lead to a need for young parents to stay in crowded accommodations with aging parents, which in turn makes marital relationships and child rearing difficult. The financial costs of this housing crisis are high. Women who are victims of spousal abuse must be flown to shelters in larger communities and often require a full range of medical services.

The study focuses on three Inuit regions: the Northwest Territories, Nunavik and Labrador. Profiles of selected shelters are developed. The effectiveness of each shelter is assessed, and specific difficulties are identified. These include: the lack of Inuit staff for counselling and the perception among the Inuit that the shelters destroy family life.

The report concludes that long-term support services are desperately needed in Inuit communities; however, second-stage housing is only one of the many supports needed to address the needs of Inuit women. An alternative to second-stage housing, the multi-service centre, could provide assistance to both victims and abusers while reflecting Inuit culture and values through a more holistic approach.

NOTE: Text in English and Inuktitut.

Ongoing Projects/Projets en cours

ABORIGINAL HOUSING NEEDS

Objective:

To provide a profile of the housing characteristics and needs of aboriginal peoples using data from the 1991 Census and post-censal Aboriginal Peoples Survey (APS).

CMHC Project Officer:

J. Angus

Division:

Social and Economic Policy and Research

Contractor:

ARK Research Associates
165 Hinton Avenue North
Ottawa, Ontario
K1Y 0Z9

CIDN:

1045 0201002

ADDRESSING SPECIAL HOUSING NEEDS IN FIRST NATION COMMUNITIES

Objective:

To research the special housing needs in First Nations communities to ensure a First Nations perspective and First Nations involvement.

CMHC Project Officer:

N. Koeck

Division:

Delivery and FP Relations
Division

Contractor:

University of Mount Allison
Rural and Small Town Program
Sackville, New Brunswick
E0A 3C0

CIDN:

1544 0100001

ANALYSIS OF MIGRATION AND RESIDENTIAL MOBILITY PATTERNS AMONG CANADA'S ABORIGINAL POPULATION

Objective:

To undertake a study examining both the migration and mobility patterns among aboriginal groups. The study will explore the relationship with the urbanization and housing conditions of the aboriginal population.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research

Centre for Future Studies in Housing and Living Environments

Contractor:

Royal Commission on Aboriginal Peoples
427 Laurier Avenue, 6th Floor
P.O. Box 1993, Station "B"
Ottawa, Ontario
K1P 1B2

CIDN:

1171 0200001

EXPLORING THE APPLICATION OF HOMEOWNERSHIP TYPE TENURES BY FIRST NATIONS COMMUNITIES ON-RESERVE

Objective:

To explore the impediments, actual practice, and potential for homeownership type tenure forms on-reserve.

CMHC Project Officer:

N. Koeck

Division:

Delivery and FP Relations Division

Contractor:

Patrick Apikan
415 Kintyre
Ottawa, Ontario
K2C 3M9

CIDN:

1401 0100005

FEASIBILITY STUDY TO OVERCOME BARRIERS FOR ABORIGINAL HOME OWNERSHIP

Objective:

Research and identify Aboriginal population statistics; average income levels; and the percentages in rental and ownership housing; etc.

CMHC Project Officer:

N. Koeck

Division:

Delivery and FP Relations Division

Contractor:

Gignul Non-Profit Housing Corporation
Suite 712
151 Slater Street
Ottawa, Ontario
K1P 5H3

CIDN:

1613 1500001

THE HOUSING CRISIS IN CANADA'S INUIT COMMUNITIES

Objective:

To conduct research on housing issues relevant to Inuit people.

CMHC Project Officer:

N. Koeck

Division:

Delivery and FP Relations Division

Contractor:

Inuit Tapirisat of Canada
Suite 510
170 Laurier Avenue West
Ottawa, Ontario
K1P 5V5

CIDN:

1196 0100001

HOUSING FOR THE MÉTIS PEOPLE: A NATIONAL STUDY ON THE STATE OF MÉTIS HOUSING

Objective:

Examine the state of housing for Métis people in the Métis homeland.

CMHC Project Officer:

N. Koeck

Division:

Delivery and FP Relations

Contractor:

Métis National Council
558 Whitewood Crescent
Saskatoon, Saskatchewan
S7J 4L1

CIDN:

1158 0100001

INVESTIGATION OF THE NEED TO REVISE "LEARN NOT TO BURN" CURRICULUM MATERIALS FOR USE IN ABORIGINAL COMMUNITIES

Objective:

To investigate the appropriateness of the U.S. based National Fire Protection Association's "Learn Not To Burn", level 1 curriculum and resource books for aboriginal communities, determine what modifications may be required and determine whether there is a role for the contractor and the Corporation in developing and distributing adapted materials, and the costs to be incurred in doing so.

CMHC Project Officer:

P. Archer

Division:

Technical Policy and Research Division

Contractor:

Assembly of First Nations
1 Nicholas Street
Suite 904
Ottawa, Ontario
K1N 7B7

CIDN:

1060 0301002

NATIVE PEOPLE/AUTOCHTONES

PLANNING OF NATIVE NORTHERN COMMUNITIES

Objective:

An evaluation of the level of success of existing planning and housing practice for Native communities in the western portion of the Northwest Territories.

CMHC Project Officer:

D. Jamieson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Gino A. Pin
Sub Post Office no. 1
3502 Raccine Road
Yellowknife, Northwest
Territories
X1A 2S9

CIDN:

1462 0200001

PROJECTIONS OF THE ABORIGINAL POPULATION IN CANADA - SUMMARY REPORT

Objective:

Prepare a summary report based on the main report, "Projections of the Population with Aboriginal Identity in Canada, 1991-2016, prepared by Statistics Canada for the Royal Commission on Aboriginal People.

CMHC Project Officer:

J. Angus

Division:

Social and Economic Policy and Research

Contractor:

Statistics Canada
Room 1708
Main Building
Tunney's Pasture
Ottawa, Ontario
K1A 0T6

CIDN:

1511 0200001

SECOND STAGE HOUSING FOR ABORIGINAL WOMEN

Objective:

To develop an appropriate research framework to measure the impact of housing conditions on the well being of Aboriginal women and their children.

CMHC Project Officer:

N. Koeck

Division:

Delivery and FP Relations

Contractor:

Native Women's
Association of Canada
9 Melrose Avenue
Ottawa, Ontario
K1N 5P3

CIDN:

1152 0100001

Ongoing Projects/Projets en cours

HEATING AND VENTILATION SYSTEMS FOR NORTHERN HOUSING: AN INVESTIGATION OF DESIGN CRITERIA AND APPROPRIATE TECHNOLOGIES

Objective:

To develop a performance based specification for heating and ventilation equipment and systems in existing remote housing; to identify available new and emerging technologies that are appropriate for remote housing heating and ventilation systems; and to evaluate the opportunities for, and potential benefits of, new approaches to heating and ventilating strategies in advanced forms of remote housing.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division
Panel on Energy Research &
Development

Contractor:

Howell-Mayhew Engineering
Inc.
15006 - 103 Avenue
Edmonton, Alberta
T5P 0N8

CIDN:

1481 0800001

RENATURALISATION DES SURFACES DÉCAPÉES AU VOISINAGE DES HABITATIONS DANS LE VILLAGE NORDIQUE DE KUUIJUAQ

Objet :

De sélectionner les espèces végétales les plus performantes en fonction des conditions locales; de déterminer les modes les plus efficaces de production des plantes; et d'identifier les techniques les plus appropriées de mise en terre des plantes.

Agent de projet pour la SCHL :

M. Desbiens

Division :

Politiques et recherche sociales
et économiques
Programme de subventions
de recherche

Contractant :

Gilles Houle
Centre d'études nordiques
Université Laval
Cité universitaire
Québec (Québec)
G1K 7P4

NIC :

1457 0200001

Ongoing Projects/Projets en cours

EFFECTS OF THE TAX SYSTEM ON RENTAL HOUSING: THE CASE IN HALIFAX

Objective:

Analyse the effects of taxes on the cost of capital (COC) and the related concepts of marginal effective tax rates (METR) and gross rent flows for rental housing investments in Halifax, Nova Scotia under different inflation conditions.

CMHC Project Officer:

B. Sanscartier

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Mr. Alex S. MacNevin
144 Glenforest Drive
Halifax, Nova Scotia
B3M 1J1

CIDN:

1633 0200001

ÉTUDE DE FAISABILITÉ POUR ÉTABLIR UN PORTRAIT DES INVESTISSEURS DANS LE LOGEMENT LOCATIF

Objet :

Déterminer les méthodes possibles en vue d'obtenir les données qui donneront un portrait des investisseurs et des détenteurs actuels de stock de logements locatifs.

Agent de projet pour la SCHL :

B. Sanscartier

Division :

Politiques et recherche sociales et économiques

Contractant :

Marc Godbout
78 Place Richelieu
Lemoyne (Québec)
J4R 2H7

NIC :

1683 0200001

THE RESIDUALIZATION OF RENTAL TENURE: IMPLICATIONS FOR HOUSING POLICY

Objective:

Examine how both the rental housing stock and the profile of rental tenants has changed over the past 2 decades from 1971-91; explore how the changing tenant profile is perceived by private rental landlords; and determine if this change is significant in influencing the decisions of private rental landlords to disinvest in rental housing. The emphasis is not on the feasibility of new rental construction but on transactions in the existing rental stock.

CMHC Project Officer:

B. Sanscartier

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Stephen P. Pomeroy
Focus Consulting
40 Java Street
Ottawa, Ontario
K1Y 3L3

CIDN:

1463 0200001

Ongoing Projects/Projets en cours

BACKGROUND PAPER ON ALTERNATIVE DEVELOPMENT STANDARDS

Objective:

Prepare a research report entitled "Background Paper on Alternative Development Standards" which will document progress made to date on local and regional alternative development standards in Canada and the U.S. and discuss future research and policy requirements in this area.

CMHC Project Officer:

D. D'Amour

Division:

Social and Economic Policy and Research

Contractor:

Berridge Lewinberg Greenberg
111 Queen Street East
Suite 200
Toronto, Ontario
M5C 1S2

CIDN:

1438 0200001
1438 0201001

REVENUE AND NET COSTS ASSOCIATED WITH CONVENTIONAL AND ALTERNATIVE DEVELOPMENT PATTERNS

Objective:

Compare life-cycle revenues and net costs associated with two patterns of development: a conventional suburban development pattern and a mixed-use, more compact development planned according to the principles of "New Urbanisms".

CMHC Project Officer:

D. D'Amour

Division:

Social and Economic Policy and Research

Contractor:

Hemson Consulting Ltd.
30 St. Patrick Street
Suite 1000
Toronto, Ontario
M5T 3A3

CIDN:

1552 0200001

Completed Reports/Rapports terminés

FACTORS INFLUENCING RESIDENTIAL MOBILITY AMONG FAMILIES WITH CHILDREN LIVING IN A LOW-INCOME AREA OF WINNIPEG, MANITOBA.

Prepared by Nancy C. Higgitt with the assistance of Marjorie Fraser and Adrienne Whiteley. Ottawa: Canada Mortgage and Housing Corporation, 1994. (External Research Program).

This study provides an in-depth analysis of 71 families with children living in rental housing in West Broadway, a low-income, inner-city neighbourhood located in Winnipeg, Manitoba. The study explored how these families perceived their housing environment and their residential mobility, and the factors that influenced them. A conceptual model consisting of categories of informants and their relationships was developed. Profiles outlining the characteristics of different categories of persons were generated. Groups were characterized according to locus of control, strength of anchor to the neighbourhood, strength and direction of life lines, strength and location of social networks and degree to which groups belonged to the neighbourhood.

The composition of families varied, but most were female-led, single parent families. Social assistance was the source of income for most families. About two-thirds of the survey respondents lived in private market housing and one-third in social housing. Perceptions of the area in which they lived varied. Almost all liked the central location but considered the neighbourhood dangerous. Of the reasons that respondents had for moving, most related to factors that pushed them out of their current housing. The reasons, in order of frequency, were changes in family composition, physical condition of housing, and landlord and caretaker problems. After six months, approximately one-third moved to other locations. A few respondents expressed concerns about the effects of mobility on their children's academic and social development.

RESIDENTIAL REHABILITATION/ RÉNOVATION DE LOGEMENTS

Completed Reports/Rapports terminés

AVANT DE RÉNOVER : CONSEILS PRATIQUES DES SPÉCIALISTES DE L'HABITATION AU CANADA = BEFORE YOU RENOVATE: RENOVATION ADVICE FROM CANADA'S HOUSING EXPERTS (ÉD. RÉV.).

Ottawa : Société canadienne d'hypothèques et de logement, 1996-1997. (LNH 6372).

Ce catalogue renferme une description des publications et des vidéocassettes que la Société canadienne d'hypothèques et de logement a produites sur la rénovation domiciliaire. Ces publications, dont quelques-unes sont gratuites, offrent une vaste gamme de renseignements précis sur la rénovation dans les domaines suivants : comment diriger une entreprise de rénovation prospère; les problèmes de construction et des solutions possibles; l'entretien et la réparation d'une maison; la qualité de l'air intérieur; la Maison saine; le chauffage et la ventilation; et l'adaptation des logements pour des personnes ayant des besoins spéciaux.

NOTE : Bilingue/bilingual

BEFORE YOU RENOVATE: ADVICE FROM CANADA'S HOUSING EXPERTS = AVANT DE RÉNOVER : CONSEILS PRATIQUES DES SPÉCIALISTES DE L'HABITATION AU CANADA (REV. ED.).

Ottawa: Canada Mortgage and Housing Corporation, 1996-97. (NHA 6372).

This catalogue describes publications and videos on home renovation that have been produced by Canada Mortgage and Housing Corporation. These publications, some of which are free, offer a wide range of detailed information on renovation in the following areas: how to run a profitable renovation business; construction problems and possible solutions; repairs and home maintenance; indoor air quality; healthy housing; heating and ventilation; and home adaptations for people with special needs.

NOTE: Bilingual/bilingue

RESIDENTIAL REHABILITATION/ RÉNOVATION DE LOGEMENTS

RAPPORT SUR LA DÉMONSTRATION EN RÉNOVATION DE RED DEER (ALBERTA) : PROJET RED DEER 1994.

Préparé par Will Mayhew, Howell-Mayhew Engineering, Inc. et Oliver Drerup, Drerup-Armstrong Ltd. Préparé pour la Division de l'innovation dans l'habitation, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1995.

Un partenariat a été créé entre la Société canadienne d'hypothèques et de logement, Ressources naturelles Canada et l'Association canadienne des constructeurs d'habitations (ACCH) aux fins de la mise sur pied d'un projet de démonstration en rénovation. Une maison individuelle qui se trouvait dans un secteur modeste de Red Deer, Alberta a été choisie pour ces rénovations. La démonstration a été effectuée à l'été 1994. La Red Deer Home Builders' Association, division locale de l'ACCH, a mené à bien le projet. La philosophie derrière ce projet était de faire preuve de responsabilité en matière d'environnement par le choix des matériaux, de démontrer l'efficacité énergétique par une meilleure isolation, une meilleure étanchéité à l'air et un bon choix d'équipement et de respecter les principes de la maison saine en assurant une bonne ventilation et en apportant une attention particulière au choix des matériaux et à la maîtrise de l'humidité. Ce rapport expose le Programme de démonstration en rénovation de Red Deer de 1994 et donne un aperçu des objectifs du projet, de l'organisation de l'équipe, des travaux de rénovation et du contrôle effectué. Le document fournit aussi une évaluation du projet du point de vue des participants.

NOTE: Also available in English under the title: Report on the Red Deer, Alberta, Renovation Demonstration: Red Deer Project '94.

Ongoing Projects/Projets en cours

ASSESSMENT REPAIR STRATEGY FOR EXISTING BUILDINGS CONSTRUCTED WITH MASONRY VENEER STEEL STUD WALLS

Objective:

To develop an overall assessment strategy for determining the extent of repairs required for existing buildings constructed with brick veneer steel stud systems.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

Contractor:

T.W.J. Trestain
573 Durie Street
Toronto, Ontario
M6S 3H2

CIDN:

0937 0300001

CONSTRUCTION D'UN INDICE SYNTHÉTIQUE POUR LES DÉPENSES DE RÉNOVATION RÉSIDENTIELLE AU QUÉBEC

Objet :

L'objectif de ce projet est de construire un indice synthétique précurseur des dépenses de rénovation résidentielle pour le Québec, dont les caractéristiques et les paramètres pourraient être éventuellement transposés aux six régions métropolitaines du Québec.

Agent de projet pour la SCHL :

G. Proulx

Division :

Centre d'analyse de marché

Contractant :

François Raymond
c/o Cirano
2020 rue Université
25ème étage
Montréal (Québec)
H3A 2A5

NIC :

1631 1000001

HOMEOWNER MOTIVATION AND INNER CITY REVITALIZATION: AN EXAMINATION OF RELATED FACTORS IN WINNIPEG

Objective:

To carry out an examination of homeowner motivation and inner city revitalization; to identify three inner city areas for analysis in the City of Winnipeg, selected on the basis of high levels of renovation activity.

CMHC Project Officer:

R. Goatcher

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Tom Carter
Professor
Dept. of Geography
University of Winnipeg
Winnipeg, Manitoba
R3B 2E9

CIDN:

1277 0200001

LOCAL INDICATORS OF RENOVATION SPENDING

Objective:

To carry out a study of local indicators of renovation spending; determine the reliability of current measures of renovation activity at the CMA level; make recommendations for the construction of comprehensive, reliable and timely indicators of renovation activity, and develop the indicators for selected CMAs.

CMHC Project Officer:

G. Proulx

Division:

Market Analysis Centre

Contractor:

Clayton Research Associates
Limited
1580 Kingston Road
Scarborough, Ontario
M1N 1S2

CIDN:

1234 1000001

MASONRY VENEER STEEL STUD RENOVATION STRATEGIES

Objective:

To evaluate different retrofit brick ties for repairing existing brick veneer/steel stud systems.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

Contractor:

University of Waterloo
Building Engineering Group
Waterloo, Ontario
N2L 3G1

CIDN:

0787 0300001

RENOVATING MULTIPLE HIGH-RISE RESIDENTIAL BUILDING FOR THE INFORMATION HIGHWAY

Objective:

To obtain information to guide building owners and managers, architects and engineers on the options and alternatives to bring high-rise residential buildings up to date for the information highway.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre for Future Studies in
Housing and Living
Environments

Contractor:

Connors Architects and Planners
1489 Hollis Street
P.o. Box 606
Halifax, Nova Scotia
B3J 2R7

CIDN:

1684 0200001

RENOVATION AND VENTILATION: A SURVEY OF CONTRACTOR AWARENESS OF VENTILATION ISSUES

Objective:

To conduct a study to examine contractors awareness of healthy housing issues and to identify industry information needs and technology transfer opportunities.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division
Panel on Energy Research and
Development

Contractor:

REID/Foster Associates
654 MacLaren Street
Ottawa, Ontario
K1R 5L2

CIDN:

1538 020001
1538 030001
1538 080001

Ongoing Projects/Projets en cours

FACULTATIVE TREATMENT SYSTEM

Objective:

To develop, install and test a facultative treatment non-mechanical sewage treatment system for household waste.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Denis Barker & Associates Ltd.
3930 Quadra Street
Victoria, British Columbia
V8X 1J4

CIDN:

1499 0200001

IMPROVEMENTS IN ON-SITE WASTEWATER TREATMENT

Objective:

To evaluate the performance of household water conservation, in association with an innovative technology for septic tank effluent treatment and nitrogen removal, to provide more cost-effective and reliable on-site wastewater treatment.

CMHC Project Officer:

J. Robar

Division:

Technical Policy and Research Division

Contractor:

Technical University of Nova Scotia
Centre for Water Resources Studies
P.O. Box 1000
Halifax, Nova Scotia

B3J 2X4

CIDN:

1047 0200001

LOWER COST ALTERNATIVE FOR MUNICIPAL SEWER INSPECTION AND MAINTENANCE

Objective:

To reduce subdivision servicing costs by the design, development and testing of a technically sound and innovative structure to replace, at a lower cost, the conventional manhole.

CMHC Project Officer:

A. Houston

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

John S. Krebs
Butler Krebs & Associates Inc.
8616 - 51 Avenue
Suite 210
Edmonton, Alberta
T6E 6E6

CIDN:

1274 0200001

MONITORING PROCEDURES AND MAINTENANCE MANUAL FOR THE OFF-GRID WATER/WASTEWATER TREATMENT SYSTEMS IN CMHC'S TORONTO HEALTHY HOUSE

Objective:

To establish the standards and procedures for monitoring and operating the innovative off-grid systems in the Toronto Healthy House for water and wastewater treatment.

CMHC Project Officer:

C. Ives

Division:

Technical Policy and Research Division

Contractor:

Mr. A.R. Townshend
930 Seven Springs Lane
RR #1
Athens, Ontario
K0E 1B0

CIDN:

0779 0209002

A NEW PROCEDURE FOR EVALUATING THE PERFORMANCE OF ON-SITE SYSTEMS

Objective:

To assess the value of the leachfield evaluation test; a method for assessing the hydraulic performance of an on-site sewage disposal system.

CMHC Project Officer:

J. Robar

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Dr. Donald H. Waller
Technical University of Nova Scotia
Centre for Water Resources Studies
P.O. Box 1000
Halifax, Nova Scotia
B3J 2X4

CIDN:

1289 0200001

HOUSING, HEALTH & ENVIRONMENT: HEALTHY COMMUNITIES PROJECT.

Ottawa: Canada Mortgage and Housing Corporation, 1995.

At a Healthy Communities Conference in the fall of 1994, leaders in the field of social housing had the opportunity to learn more about Healthy Housing and the Healthy Communities Project. An invitation to assist with the project led to the involvement of a number of volunteers who agreed to liaise with the residents of their housing communities. Research on resources and strategies led to the piloting of prototype materials in the period prior to Christmas 1994. The onset of the new year saw intensive work begin on the training modules and the survey, while the preliminary scheduling for presentations got under way.

The purpose of the survey was to examine the knowledge of environmental issues primarily related to the home and living habits. Residents of several housing projects (public, non-profit, private non-profit and cooperatives) were surveyed concerning their knowledge and practices on a wide variety of topics. Residents were invited to participate in half-day workshops on Healthy Versus Less Healthy Environments. The Workshops were designed to provide new information and to encourage discussion on topics such as: indoor air quality; packaging; resource use; hazardous products; health and environment; renovations; and waste management.

The project was successful in terms of reaching grassroots residential communities and increasing their awareness of the links between housing and health. However, it would be preferable to run such a project over a significantly longer time period, with presentations scheduled to coincide with events that already bring people together.

Ongoing Projects/Projets en cours

ANALYSIS OF THE RELATIVE COST AND EFFECTIVENESS OF SELECTED SOCIAL RENTAL HOUSING PROGRAMS

Objective:

To assess the effectiveness of selected rental housing programs in addressing the problems of affordability, adequate supply, and housing quality. The study will determine how traditional non-profit supply programs and shelter allowances perform, over time under different market conditions.

CMHC Project Officer:

P. Deacon

Division:

Social and Economic Policy and Research

Contractor:

Canadian Housing and Renewal Association
251 Laurier Avenue West
Suite 304
Ottawa, Ontario
K1P 5J6

CIDN:

1351 0600001

**CASE STUDIES OF
COMMUNITY IMPACTS FOR
THE EVALUATION OF THE
URBAN SOCIAL HOUSING
PROGRAMS**

Objective:

Case studies of community impacts for the evaluation of the urban social housing programs.

CMHC Project Officer:

P. Streich

Division:

Program Evaluation Division

Contractor:

SPR Associates Incorporated
2 Carleton Street
Suite 804
Toronto, Ontario
M5B 1J3

CIDN:

1008 0501010

**DEVELOPMENT OF
INDICATORS OF QUALITY
OF LIFE, HEALTH AND
WELL-BEING IN CANADIAN
SOCIAL HOUSING:
IDENTIFICATION OF
INDICATORS OF HEALTH
PROMOTING SOCIAL
HOUSING SETTINGS**

Objective:

To develop indicators of health and well-being which would apply to social housing and could be used by CMHC for research, policy analysis and program evaluation.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre for Future Studies in Housing and Living Environments

Contractor:

Veronica Doyle
1317 Richardson Street
Victoria, British Columbia
V8S 1P6

CIDN:

1023 0200003

**NATIONAL ENABLEMENT
DEMONSTRATION
INITIATIVE**

Objective:

To undertake the development and coordination of a national enablement demonstration initiative to teach social housing groups the skills and techniques to use in order to develop self-help housing strategies.

CMHC Project Officer:

J. Burr

Division:

Delivery and FP Relations Division

Contractor:

Canadian Housing and Renewal Association
251 Laurier Avenue West
Suite 401
Ottawa, Ontario
K1P 5J6

CIDN:

1436 1500001

**PANEL ON HOUSING AND
SOCIAL POLICY AT THE
7TH BI-ANNUAL SOCIAL
WELFARE POLICY
CONFERENCE**

Objective:

To arrange and conduct a panel discussion on housing and social policy at the 7th Bi-annual Social Welfare Policy Conference and to produce and distribute a report on the panel proceedings.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre for Future Studies in Housing and Living Environments

Contractor:

Caledon Institute of Social Policy
Holland Cross
1600 Scott Street
Suite 620
Ottawa, Ontario
K1Y 4N7

CIDN:

1487 0200001

**PROTOCOLE DE
RECHERCHE POUR
ÉVALUER LE RÔLE DU
LOGEMENT SOCIAL
AVEC SUPPORT
COMMUNAUTAIRE**

Objet :

De développer un protocole de recherche pour évaluer le rôle du logement social avec support communautaire sur l'amélioration des conditions de vie dans un processus continu d'intégration sociale pour les personnes seules, à faible revenu et à risque de marginalisation.

Agent de projet pour la SCHL :

J. Taggart

Division :

Politiques et recherche sociales
et économiques

Contractant :

La Fédération des OSBL
d'habitation de Montréal
1650, rue St-Timothée
Suite 206
Montréal (Québec)
H2L 3P1

NIC :

1471 0100001

Completed Reports/Rapports terminés

ORGANIC AND ECOLOGICAL GROUNDS MAINTENANCE FOR MULTIPLE HOUSING.

Prepared by Marius Ois. Ottawa: CMHC, 1995. (Housing Technology Incentives Program).

The purpose of this report is to examine conventional grounds maintenance practices and to report on new methods of maintaining the grounds of housing developments. Emphasis is placed on sustainable, ecological maintenance instead of conventional "curb appeal". The report lists and analyses current information on the various maintenance approaches. Much of this information had to be gathered from sources not directly related to housing management, and was adapted for use and application in the housing management sector. Credit is given to established programs in the municipal and commercial sectors, where ecological maintenance practices are either in place or in an evolutionary stage.

The report also outlines in great detail the benefits of ecological maintenance. The most apparent benefits are:

- Protection of the urban environment;
- Improved human and plant health;
- Decreased reliance on pesticides, herbicides and chemical soil additives;
- Improved development of plants;
- Reduction of waste;
- Re-use of existing resources; and
- Cost savings in labour and materials.

POSSIBILITÉS D'ACCÉLÉRER LA MISE EN OEUVRE DES HABITATIONS ÉCOLOGIQUES TRÈS PERFORMANTES.

Préparé par Robert J. Booth et Peter S. Kettenbeil, Hansed Booth Inc. Préparé dans le cadre du Programme de subventions de recherche. Ottawa : Société canadienne d'hypothèques et de logement, 1994, c.-à-d. 1995.

Cinq innovations de récents programmes canadiens de démonstration en matière d'habitation ont été choisies en raison de leur potentiel de faire un apport important à l'habitation écologique très performante. On a dégagé des possibilités d'accélérer la mise en oeuvre de ces innovations en déterminant des façons de tirer parti des occasions qui se présentent et de surmonter les obstacles à chacune de ces innovations. Les cinq innovations sont les pompes géothermiques, des chauffe-eau intégrés efficaces au gaz, les super fenêtres, les systèmes de purification de l'eau et l'aménagement paysager global.

La surabondance d'information semble bien être l'obstacle le plus important à l'adoption des innovations éconergétiques. On constate un réel besoin de réduire la quantité de documentation et d'accroître la qualité de l'information technique. Les avantages et la rentabilité des innovations ne sont pas clairement indiqués aux consommateurs; souvent la performance et les avantages sont encore inconnus. On retarde souvent la décision d'acheter en raison de la confusion qui règne quant à la meilleure démarche à suivre pour s'assurer des avantages à long terme.

Le rapport identifie plusieurs façons principales d'accélérer l'adoption des innovations mentionnées ci-dessus. La distribution efficace d'une documentation simple, claire et sûre sur les avantages économiques de la mise en oeuvre de diverses options d'améliorations est recommandée. Le fort prix d'achat de la plupart des produits écologiques en matière énergétique peut être compensé par un financement à terme offert par les services d'utilité publique et les fournisseurs des produits. La réduction mensuelle de la consommation énergétique peut faire que ces innovations se paient littéralement d'elles-mêmes. Des garanties de rendement des associations de fabricants réduiraient de beaucoup les craintes à cet égard.

NOTE: Also available in English under the title: *Opportunities for Accelerating Implementation of Environmentally Sustainable High Performance Housing.*

Ongoing Projects/Projets en cours

CMHC COLLABORATION WITH FCM CONCERNING THE OECD PROJECT GROUP ON THE ECOLOGICAL CITY

Objective:

To produce a draft national overview paper and undertake other activities to represent Canada in relation to the project of the Organization for Economic Cooperation and Development (OECD) entitled "The Ecological City".

CMHC Project Officer:

P. Spurr

Division:

International Relations Division

Contractor:

Federation of Canadian Municipalities
24 Clarence Street
Ottawa, Ontario
K1N 5P3

CIDN:

1313 0900001

DEVELOPMENT OF COMMUNITY-BASED SOCIAL MARKETING APPROACHES FOR ACHIEVING SUSTAINABILITY

Objective:

Accelerate the shift towards sustainability through design, testing and refining of six community-based social marketing campaigns promoting healthier housing and communities, sustainable use of renewable resources, reduced air and water pollution, reduced waste disposal and reduced climate change problems.

CMHC Project Officer:

S. Rothwell

Division:

Technical Policy and Research Division

Contractor:

Supply and Services Canada
Environmental Innovation Program
1201, Phase III
Place du Portage
Hull (Québec)
K1A 0S5

CIDN:

1497 0200001

HEALTHY HOUSING DEMONSTRATION

Objective:

The construction of a demonstration autonomous house in Toronto in general accordance with the winning housing design in CMHC's healthy housing design competition.

CMHC Project Officer:

S. Rothwell

Division:

Technical Policy and Research Division

Contractor:

Liefhebber, Martin
Architect Inc.
177 First Avenue
Toronto, Ontario
M4M 1X3

CIDN:

0779 0202003

SUSTAINABLE DEVELOPMENT/ DÉVELOPPEMENT DURABLE

SUSTAINABLE LANDSCAPE DESIGN FOR RESIDENTIAL DEVELOPMENTS

Objective:

To highlight the link between sustainable development for housing with the condition, composition and use of native vegetation.

CMHC Project Officer:

S. Sandroek

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Karen Vagelatos
Vagelatos Associates Landscape
Architecture Ltd.
207-2211 West 4th Avenue
Vancouver, British Columbia
V6K 4S2

CIDN:

1466 0200001

TESTING CONSUMER RECEPTIVITY TO SUSTAINABLE AND MORE AFFORDABLE SUBURB DESIGN IN CALGARY

Objective:

To address the question:
are Canadian consumers
(houseseekers, homebuyers)
receptive to residential
community design that
incorporates sustainable
development principles and
performance characteristics?

CMHC Project Officer:

F. Grammenos

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

William T. Perks
Faculty of Environmental Design
Calgary University
2500 University Drive, N.W.
Earth Sciences
Calgary, Alberta
T2N 1N4

CIDN:

1278 0200001

TELEWORK/TÉLÉTRAVAIL

Ongoing Projects/Projets en cours

BEYOND THE HOME OFFICE: AN EXPLORATORY STUDY OF RESIDENTIALLY-BASED, SHARED TELEWORK SPACES

Objective:

To develop and explore a new concept - a residentially-based shared telework space.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and
Research

External Research Program

Contractor:

Laura C. Johnson
Associates Inc.
374 Sackville Street
Toronto, Ontario
M4X 1S5

CIDN:

1458 0200001

Ongoing Projects/Projets en cours

LES ENSEMBLES RÉSIDENTIELS ET LA SÉCURITÉ ROUTIÈRE

Objet :

La présente recherche porte sur l'étude des rapports entre la forme des milieux résidentiels et la sécurité des déplacements des différents usagers de la route.

Agent de projet pour la SCHL :

L. Howell

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Denise Piché
École d'architecture
Université Laval
Québec (Québec)
G1K 7P4

NIC :

0925 0200001

CONTRÔLE PERFORMANT DES SYSTÈMES DE VENTILATION ET DE L'HUMIDITÉ DANS LES RÉSIDENCES

Objet :

Proposer et évaluer une stratégie et du matériel de contrôle pour les installations de ventilation avec ou sans récupérateur de chaleur.

Agent de projet pour la SCHL :

D. Fugler

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Monsieur Pierre Hosatte
TN Conseil, Conseillers en technologie de l'environnement inc.
7744, rue Sherbrooke Est
Salle 204
Montréal (Québec)
H1L 1A1

NIC :

1635 0200001

DEVELOPMENT OF EFFICIENCY IMPROVEMENT TIMELINESS FOR RESIDENTIAL VENTILATION EQUIPMENT

Objective:

To assemble information on residential mechanical ventilation equipment (fans, blowers, heat exchangers), and to develop a consensus on how quickly the efficiency of these devices can and should be improved over the next decade.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research
Division

Contractor:

Buchan Lawton Parent Ltd.
5370 Canotek Road
Ottawa, Ontario
K1J 8X7

CIDN:

1242 0200001

FIELD STUDY OF OCCUPANT INTERACTIONS AND VENTILATION EFFECTIVENESS OF HEAT RECOVERY VENTILATION SYSTEMS

Objective:

To conduct a field study of occupant interactions and ventilation effectiveness of heat recovery ventilation systems.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division
Panel on Energy Research and
Development

Contractor:

Buchan Lawton Parent Ltd.
Suite 210
30 East Beaver Creek
Richmond Hill, Ontario
L4B 1G6

CIDN:

1376 0800001
1376 0200001

HVAC DESIGN AND INSTALLATION PRACTICES IN MID AND HIGH-RISE BUILDINGS

Objective:

To conduct a study to evaluate the changes required to existing HVAC design and installation practices in mid and high-rise buildings in order to ensure compliance with the 1995 National Building and Energy Codes and to study the performance of ventilation systems within these types of buildings.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

Sheltair Scientific Ltd.
#2 - 3661 West 4th Avenue
Vancouver, British Columbia
V6R 1P2

CIDN:

1424 0200001

VENTILATION/VENTILATION

MONITOR THE PERFORMANCE OF AN IMPROVED WALL

Objective:

Monitor the performance of the test wall located at 312 Cumberland Street in Ottawa so that the performance of the wall will be documented when the head joints are opened up in order to permit natural ventilation in the wall cavity of the test wall. The proposed work will help determine the effectiveness of having both top and bottom ventilation in a wall.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research Division

Contractor:

Keller Engineering Associates Inc.
1390 Prince of Wales Drive
Ottawa, Ontario
K2C 3N6

CIDN:

0411 0305001

OPTIMIZE RESIDENTIAL HVAC DUCTWORK SYSTEMS

Objective:

To conduct a study to assess the potential to optimize residential HVAC ductwork systems.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research Division

Contractor:

Allen Associates
400 Mount Pleasant Road
Suite 5
Toronto, Ontario
M4S 2L6

CIDN:

1431 0200001

TEST-RIG FOR EVALUATING RESIDENTIAL MOTOR-FAN SET PERFORMANCE

Objective:

Development and testing of a device for testing the performance of residential ventilating equipment.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research Division
Panel on Energy Research & Development

Contractor:

Sheltair Scientific Ltd.
2-3661 West 4th Avenue
Vancouver, British Columbia
V6R 1P2

CIDN:

1368 0800001
1368 0200001

**APPLICATION FOR
SHOWER WASTE WATER
HEAT RECOVERY**

Objective:

To test the performance of a heat recovery shower product.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
Housing Technology Incentives
Program

Contractor:

Heat Exchangers NF
Incorporated
26 Georgia Drive
Stephenville, Newfoundland
A2N 2T5

CIDN:

1500 0200001

**DEVELOPMENT OF
A RESIDENTIAL WATER
USE MODEL**

Objective:

To carry out the development of
a residential water use model.

CMHC Project Officer:

P. Russell

Division:

Technical Policy and Research
Division
Panel on Energy Research and
Development

Contractor:

Centre for Water Resources
Studies
Technical University of Nova
Scotia
P.O. Box 1000
1360 Barrington Street
Halifax, Nova Scotia
B3J 2X4

CIDN:

1422 0200002
1422 0800001

**HIGH FREQUENCY WATER
SHUT OFF CONTROL**

Objective:

Develop a working prototype of
the high frequency water shut off
control unit.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
Housing Technology Incentives
Program

Contractor:

Victor J. Diduck
755 Kyle Drive
Kamloops, British Columbia
V2B 7J5

CIDN:

1265 0200001

Ongoing Projects/Projets en cours

MEASUREMENT OF SPECTRAL TRANSMITTANCE OF REPRESENTATIVE GLAZING SAMPLES

Objective:

To obtain the spectral transmittance data of a representative group of window glazings including two-pane and three-pane assemblies with and without low-emissivity coatings; to present the data in a manner that would allow comparisons of the spectral characteristics of the window assemblies.

CMHC Project Officer:

V. Salares

Division:

Technical Policy and Research
Division

Contractor:

University of Calgary
Centre for Livable Communities
2500 University Drive N.W.
Calgary, Alberta
T2N 0G3

CIDN:

1214 1100004

FINAL REPORT ON THE EVALUATION OF THE PROJECT HAVEN PROGRAM AND UPDATE ON THE NEXT STEP PROGRAM ACTIVITIES.

Prepared by Program Evaluation Division, Canada Mortgage and Housing Corporation. Ottawa: The Division, 1995. 2 vol.

Volume 1: Final Report

Volume 2: Summary Report

Project Haven shelters are providing short-term emergency shelter to abused women and their children. The Project Haven Evaluation considers a full range of issues related to the Project Haven Program, namely: program rationale; achievement of program objectives, program impacts and effects; and program design and delivery. In addition to the focus on Project Haven, this report provides an update on program activity related to the Next Step Program.

The Evaluation found that a continuing need exists for shelters to serve women and children in violent domestic situations. While Project Haven has increased the capacity of first-stage shelters by about 20 percent, there is still unmet potential demand. The Program has been successful in meeting the needs of rural and Aboriginal women; however, meeting the needs of women in remote communities, immigrant women and women with disabilities has been more challenging. Overall, the program design and delivery of Project Haven has been highly effective in providing shelter projects in partnership with other funding agencies. CMHC's delivery of the program was seen as effective by all parties. There were, however, higher program delivery costs than anticipated.

As for the status of the Next Step Program, \$20.6 million were allocated to provide longer-term, second-stage housing for abused women and children. Assuming projects are developed as proposed, an estimated 51 projects will be developed under Next Step, with 105 first-stage bedrooms and 163 second-stage units for an estimated total capital funding of \$18.32 million. It is anticipated that about 23 percent of Next Step projects and nearly 20 percent of the units will be provided for First Nations women.

NOTE : Aussi disponible en français sous le titre : Rapport définitif sur l'évaluation d'Opération refuge et mise à jour sur les activités dans le cadre de l'Étape suivante.

RAPPORT DÉFINITIF SUR L'ÉVALUATION D'OPÉRATION REFUGE ET MISE À JOUR SUR LES ACTIVITÉS DANS LE CADRE DE L'ÉTAPE SUIVANTE.

Préparé par la Division de l'évaluation de programme, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1995. 2 vol.

Volume 1 : Rapport définitif

Volume 2 : Rapport sommaire

Les centres d'hébergement d'Opération refuge fournissent un hébergement d'urgence à court terme aux femmes victimes de violence et à leurs enfants. Dans le cadre de l'évaluation d'Opération refuge, on a examiné une gamme complète d'aspects relatifs au programme, à savoir, sa justification, la réalisation de ses objectifs, ses incidences et ses effets, ainsi que sa conception et son application. En plus de mettre l'accent sur le programme Opération refuge, ce rapport fournit une mise à jour sur les activités effectuées dans le cadre du programme l'Étape suivante.

WOMEN/FEMMES

Les résultats de l'évaluation indiquent qu'il existe un besoin permanent de refuges pour servir les femmes et les enfants qui sont victimes de violence familiale. Bien que l'Opération refuge ait augmenté d'environ 20 % la capacité d'hébergement d'urgence, il existe encore une importante demande éventuelle insatisfaite. Le programme a réussi à répondre aux besoins des femmes rurales et autochtones; cependant, le programme semble moins bien répondre aux besoins des femmes dans des collectivités éloignées, des femmes handicapées et des immigrantes. Dans l'ensemble, la conception et l'application d'Opération refuge en collaboration avec les autres organismes de financement ont été jugées très efficaces. L'application du programme par la SCHL a également été perçue comme efficace par toutes les parties concernées. Pourtant, les coûts d'application du programme ont été plus élevés que prévu.

Quant au programme l'Étape suivante, on prévoyait la distribution de crédits de 20,6 millions de dollars pour la production de logement transitoire à plus long terme pour les femmes et les enfants victimes de violence familiale. En supposant que les projets seront réalisés tel que prévu, on estime que 51 projets seront menés à terme dans le cadre de l'Étape suivante, comprenant 105 chambres en refuge d'urgence et 163 appartements en centre d'hébergement transitoire. Le coût total des immobilisations serait de 18,32 millions de dollars. On prévoit qu'environ 23 % des centres de l'Étape suivante et près de 20 % des places ainsi créées seront à l'intention des femmes autochtones vivant dans des réserves.

NOTE: Also available in English under the title: *Final Report on the Evaluation of the Project Haven Program and Update on the Next Step Program Activities.*

Ongoing Projects/Projets en cours

BUILDING FUTURES - HOUSING DOCUMENTARY PROJECT

Objective:

To facilitate the production of a video documentary on the development of the Downtown Women's Project with the intent to promote similar "self-help" or "enablement" in other environments.

CMHC Project Officer:

G. Weisz

Division:

Social and Economic Policy and Research

Contractor:

Friday Street Productions Ltd.
1274 May Street
Victoria, British Columbia
V8V 2T2

CIDN:

1535 0100001

EVALUATION OF NEXT STEP PROGRAM

Objective:

To carry out an evaluation study of the Next Step Program.

CMHC Project Officer:

P. Streich

Division:

Program Evaluation Division

Contractor:

SPR Associates Incorporated
2 Carlton Street
Suite 804
Toronto, Ontario
M5B 1J3

CIDN:

1507 1500004

INVESTIGATION OF ISSUES FOR THE EVALUATION OF THE NEXT STEP PROGRAM

Objective:

Review all relevant reports and studies in the field of shelters to assist women from violent situations, with special emphasis on studies related to longer-term, second-stage housing approaches. The study will consider relevant information from Canada, the U.S., Australia, the U.K. and any other international experience.

CMHC Project Officer:

P. Streich

Division:

Program Evaluation Division

Contractor:

Janet McClain
4C View Avenue
P.O. Box 1166
Wolfview, New Brunswick
B0P 1X0

CIDN:

1008 0501006

INVESTIGATION OF ISSUES FOR THE EVALUATION OF THE NEXT STEP PROGRAM

Objective:

To develop a description of the Next Step Program and the projects funded under the 1991-1995 Next Step Program.

CMHC Project Officer:

P. Streich

Division:

Program Evaluation Division

Contractor:

SPR Associates Inc.
2 Carleton Street
Suite 804
Toronto, Ontario
M5B 1J3

CIDN:

1008 0501008

INVESTIGATION OF ISSUES FOR THE EVALUATION OF THE NEXT STEP PROGRAM

Objective:

To investigate the concept of second-stage housing from an operational perspective, and discuss the essential attributes of this type of housing which could be addressed in the evaluation of CMHC's Next Step Program.

CMHC Project Officer:

P. Streich

Division:

Program Evaluation Division

Contractor:

Susan Nelson
NHL Consulting Group
P.O. Box 465
Lantzville, British Columbia
V0R 2H0

CIDN:

1008 0501007

Ongoing Projects/Projets en cours

**REVUE DES ÉCRITS SUR LES
CHANGEMENTS DANS
L'ENVIRONNEMENT DU
TRAVAIL**

Objet :

Effectuer une revue des écrits qui
présentent les changements dans
la nature du travail au cours des
dernières années au Canada.

Agent de projet pour la SCHL :

B. Sanscartier

Division :

Politiques et recherche sociales et
économiques

Contractant :

Université de Montréal
École de relations industrielles
C.P. 6128
Succursale Centre-Ville
Montréal (Québec)
H3C 3J7

NIC :

1681 0200001

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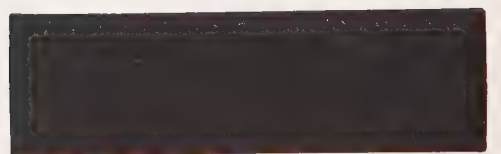
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1996

HOUSING RESEARCH ORDER FORM

FORMULE DE COMMANDE DE LA PUBLICATION RECHERCHE EN LOGEMENT

If you wish to receive any of the completed reports or bibliographies listed, or if you would like to be on the mailing list to receive *Housing Research*, please fill out this form and send it to:

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Canada Mortgage and Housing Corporation
700 Montreal Road
Ottawa ON K1A 0P7

Fax (613) 748-4069

Pour recevoir tout rapport terminé ou les bibliographies indiquées, ou bien encore faire ajouter votre nom à la liste d'envoi de *Recherche en logement*, veuillez remplir cette formule et l'envoyer à :

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Ottawa ON K1A 0P7

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INTRODUCTION/INTRODUCTION

Under Part IX of the National Housing Act the Government of Canada provides funds to Canada Mortgage and Housing Corporation to conduct research into the social, economic and technical aspects of housing and related fields.

Housing Research Quarterly is compiled and produced on a quarterly basis by the Canadian Housing Information Centre. This publication provides information and access to research which is undertaken and sponsored by the Corporation.

The publication contains information on completed research reports, new publications, videos and bibliographies, as well as ongoing research projects. An alphabetical title index of items listed is included at the end for quick reference.

"Ongoing Projects" refer to research projects which are currently underway. No reports are yet available. Once the project is completed, and a report is available for distribution, it will be listed in *Housing Research Quarterly* under the "Completed Reports" area with a full bibliographic citation and abstract. The "Ongoing Projects" sections of *Housing Research Quarterly* contain the following information:

Title:

Title of the project, which may not necessarily be the same as the final report.

Objective:

Gives a brief description of the project.

CMHC Project Officer:

Individual within CMHC who is managing the project.

Division:

Division within CMHC which is managing the project.

Contractor:

Individual or firm undertaking the research.

CIDN:

Contract Identification Number.

En vertu de la Partie IX de la loi nationale sur l'habitation le gouvernement du Canada fournit des fonds à la Société canadienne d'hypothèques et de logement pour la recherche sur les aspects sociaux, économiques et techniques du logement et des domaines connexes.

Recherche en logement-rapport trimestriel est produit chaque trimestre par le Centre canadien de documentation sur l'habitation. Il contient des renseignements sur la recherche entreprise et subventionnée par la Société.

La publication présente des renseignements sur les rapports de recherche, les nouvelles publications, les vidéos et les bibliographies, ainsi que sur les projets de recherche en cours. Une liste alphabétique par titres, facile à consulter, se trouve à la fin de l'ouvrage.

Tous les projets non terminés, n'ayant pas encore fait l'objet d'un rapport sont des «projets en cours». Une fois qu'il sera terminé, publié et disponible, le rapport figurera dans la publication *Recherche en logement-rapport trimestriel* sous la rubrique «Rapports terminés» avec références bibliographiques et sommaire. Les sections «Projets en cours» de *Recherche en logement-rapport trimestriel* contiennent les renseignements suivants :

Titre :

Titre du projet, qui n'est pas nécessairement le même que celui du rapport final.

Objet :

Brève description du projet.

Agent de projet pour la SCHL :

Personne au service de la Société qui gère le projet.

Division :

Division de la SCHL chargée de gérer le projet.

Contractant :

Personne ou firme chargée de la recherche.

NIC :

Numéro d'identification du contrat.

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ACOUSTICS/ACOUSTIQUE

Ongoing Projects/Projets en cours

QUALIFICATION DU DEGRÉ DE CONFORT ACOUSTIQUE PROCURÉ PAR LES IMMEUBLES MULTILOGEMENTS

Objet :

L'objectif de la recherche est de doter l'industrie de la construction d'un outil fiable d'évaluation du degré de confort acoustique d'un logement. Ceci peut être accompli en regroupant les connaissances acquises lors de projets de recherche précédents sous forme d'objectifs d'isolation sonore et en élaborant un protocole d'évaluation préliminaire.

Agent de projet pour la SCHL :

M. Desbiens

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

Michel Morin
MJM Conseillers en Acoustique
Inc.
6555, chemin Côte-des-Neiges
Bureau 440
Montréal (Québec)
H3S 2A6

NIC :

1461 0200001

ATTICS/GRENIERS

Ongoing Projects/Projets en cours

DEMONSTRATION OF IMPROVED ATTIC VENTILATION AND MOISTURE CONTROL STRATEGIES

Objective:

Test unconventional attic ventilation strategies in both new and existing houses. Use the existing attic computer program to help select which venting strategy will work best.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research
Division

Contractor:

Sheltair Scientific Ltd.
#2-3661 West 4th Avenue
Vancouver, British Columbia
V6R 2P1

CIDN:

1377 0200001

1377 0800001

BUILDING LAW/ RÉGLEMENTATION DE LA CONSTRUCTION

Completed Reports/Rapports terminés

GUIDE D'APPLICATION DE LA PARTIE 9 DU CODE NATIONAL DU BÂTIMENT AUX IMMEUBLES EXISTANTS.

Préparé par A.T. Hansen Consulting Services. Préparé pour la Division des normes et services professionnels, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1995.

Ce rapport a été commandé par la SCHL pour répondre aux préoccupations de ceux qui souhaiteraient avoir une orientation plus spécifique aux immeubles existants tout en tenant compte des inquiétudes exprimées par la Commission canadienne des codes du bâtiment et de prévention des incendies (CCCBI) concernant la souplesse et un niveau égal d'hygiène et de sécurité à assurer aux occupants de tous les immeubles, qu'ils soient neufs ou anciens.

Le rapport comporte trois chapitres. Dans le premier, on traite des principes qui devraient régir l'application du Code dans le cas des immeubles existants. Le deuxième énonce les objectifs de chacun des articles de la partie 9. Dans le troisième, on trouve cinquante exemples de problèmes types occasionnés par l'application du Code national du bâtiment aux immeubles existants. On y propose des solutions, accompagnées d'une explication de la manière dont les nouvelles solutions de rechange ont été élaborées.

Un projet d'article à inclure dans la partie 9 est présenté à l'annexe A. Ce nouvel article a pour objet d'établir des exigences propres à la réglementation des immeubles existants, dans la mesure où cela est réalisable. Il devrait faire le pont, juridiquement parlant, entre les dispositions du CNB et l'information que renferme le présent guide. Il a été proposé que le nouvel article soit appliqué de concert avec le Guide pour assurer une marge de manoeuvre dans la réglementation relative aux immeubles existants, tout en offrant aux intéressés une orientation plus précise quant à la mesure dans laquelle le CNB devrait être appliqué aux immeubles existants.

NOTE: Also available in English under the title: *Guide for the Application of Part 9 of the National Building Code to Existing Buildings.*

BUILDING LAW/ RÉGLEMENTATION DE LA CONSTRUCTION

Completed Reports/Rapports terminés

GUIDE FOR THE APPLICATION OF PART 9 OF THE NATIONAL BUILDING CODE TO EXISTING BUILDINGS.

Prepared by A.T. Hansen Consulting Services. Prepared for Professional Services and Standards Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.

This report was commissioned by CMHC to address the concerns of those who wished to have more specific direction in the regulation of existing buildings, while at the same time taking into account the concerns expressed by the Canadian Commission on Building and Fire Codes (CCBFC) on the desirability of flexibility and a common implied level of health and safety for the occupants in all buildings, new and old.

The report is presented in three chapters. The first discusses the principles by which code requirements should be applied to existing buildings. The second outlines the aims and objectives of each Article in Part 9. The third chapter is a compilation of 50 examples of typical problems that may arise in applying the National Building Code (NBC) to existing buildings. Solutions to these problems are suggested, together with an explanation as to how the alternative design solutions were reached.

A new section proposed for inclusion in Part 9 is presented in Appendix A. The purpose of this new Section is to provide specific requirements for the regulation of existing buildings to the extent that this is practicable. It is intended to provide a legal bridge between the requirements of the NBC and the information in this Guide. It is proposed that the new section will be used in concert with the Guide to allow a flexible approach in regulating existing buildings, while at the same time providing code users more specific direction on the extent to which the NBC should be applied to existing buildings.

NOTE : Aussi disponible en français sous le titre : *Guide d'application de la partie 9 du Code national du bâtiment aux immeubles existants.*

BUILDING LAW/ RÉGLEMENTATION DE LA CONSTRUCTION

Completed Reports/Rapports terminés

IMPLICATIONS OF ADOPTING THE NATIONAL ENERGY CODE FOR HOUSING IN ONTARIO.

Prepared for Ontario Hydro, Ontario Ministry of Housing, Ontario Ministry of Environment and Energy, Ontario Natural Gas Association and Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.

This study examines a broad range of implications associated with the adoption of the National Energy Code for Housing (NECH) in Ontario. The NECH differs in structure from the present provisions for energy efficiency in the Ontario Building Code (OBC) in that it is a companion document to the National Building Code (NBC), whereas requirements for energy efficiency in new housing are integral to Part 9 of the OBC. Its adoption would imply a major revision to the current version of the OBC.

This study compares the OBC and the NECH providing commentary on key differences between the documents. It examines the energy, environmental and industry implications of adopting the NECH in Ontario. It reviews the cost implications of adoption from a capital, energy and life cycle viewpoint while examining environmental costs by monetizing space heating equipment emissions. A number of technical issues are examined by this report in relation to specific NECH requirements. Finally, adoption issues are presented as identified by two focus groups comprised of industry and enforcement officials.

The NECH contains a number of positive aspects including specific improvements over the current version of the OBC. However, for the large majority of Ontario houses, the energy and environmental benefits of fully adopting the NECH are marginal in relation to the most recent requirements for energy efficiency adopted by the OBC in 1993. A general consensus among stakeholders indicates that positive aspects of the NECH be incorporated into Part 9 of the OBC, while the trade-off and performance compliance paths of the NECH be referenced in OBC Section 9.38, Thermal Design.

BUILDING LAW/ RÉGLEMENTATION DE LA CONSTRUCTION

Ongoing Projects/Projets en cours

COMPUTER CONFERENCING TO IMPROVE TRAINING ON RESIDENTIAL BUILDING CODES AND REGULATIONS

Objective:

To develop an Internet web page through a jurisdiction overriding various municipalities (e.g. Greater Vancouver Regional District) utilizing current hypertext machine language (HTML), and technology that will contain a conferencing module to allow computer interactivity between the key stakeholders and the development

of an expert system database; establish an evolving body of knowledge in the critical residential design, construction and permitting areas (e.g. building envelope and fire safety); and explore the development of other knowledge bases.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

John J. Guenther
Manager Inspections
The City of North Vancouver
141 West 14th Street
North Vancouver, British
Columbia
V7M 1H9

CIDN:

1632 0200001

BUILDING MATERIALS/ MATÉRIAUX DE CONSTRUCTION

Completed Reports/Rapports terminés

BUILDING MATERIALS FOR THE ENVIRONMENTALLY HYPERSENSITIVE.

*Prepared by Jools Development. Project Team: Julie Van Vliet, Oliver Drerup, Jeff Feigin, Ed Lowans, David Rousseau, Lynda Brooks and George Bruce. Ottawa: Canada Mortgage and Housing Corporation, 1995. (NHA 6742) **Price \$29.95 plus GST and handling charges.*

NOTE: Available from: EDM/CMHC, P.O. Box 3077, Markham, ON, L3R 6G4,
Tel.: 1-800 -668-CMHC.

"Building Materials for the Environmentally Hypersensitive" was prepared to help individuals and builders select building materials that have minimal negative effects on the health of environmentally hypersensitive occupants. The materials included are those typically used in residential construction in cold climates. Two kinds of information were used in evaluating the materials: 1) known or published information about the products; and 2) the experiences of hypersensitive individuals with these materials. The responses of hypersensitive individuals to the building materials were used as an indicator of how these materials affect the environmentally hypersensitive.

NOTE : Aussi disponible en français sous le titre: *Matériaux de construction pour les logements des personnes hypersensibles.* (LNH 6743)

MATÉRIAUX DE CONSTRUCTION POUR LES LOGEMENTS DES PERSONNES HYPERSENSIBLES.

*Rédigé par Jools Development; équipe de rédaction : Julie Van Vliet, Oliver Drerup, Jeff Feigin, Ed Lowans, David Rousseau, Lynda Brooks et George Bruce. Ottawa : Société canadienne d'hypothèques et de logement, 1995. (LNH 6743) **Prix 29,95\$ + TPS + frais d'expédition.*

NOTE : Disponible par la poste : EDM/SCHL, C.P. 3077, Markham, ON, L3R 6G4, Tél. : 1-800-463-SCHL.

Le guide "Matériaux de construction pour les logements des personnes hypersensibles" a pour objet d'aider les individus et les constructeurs à arrêter leurs choix sur des matériaux et produits peu préjudiciables à la santé des personnes hypersensibles aux polluants environnementaux. Les matériaux et produits répertoriés sont d'usage courant en construction résidentielle dans les régions froides. Deux catégories d'informations ont servi à l'évaluation des matériaux : l'information connue ou publiée à l'égard des produits, de même que les expériences de personnes hypersensibles. Les réactions que suscitent les matériaux de construction chez les personnes hypersensibles indiquent comment ces matériaux peuvent les affecter.

NOTE: Also available in English under the title: Building Materials for the Environmentally Hypersensitive. (NHA 6742)

Ongoing Projects/Projets en cours

BIocreTE

Objective:

To develop and test a type of building material and system known as biocrete/biobloc, composed of biomass waste materials and soil cements which may be used together to produce a low cost continuous building envelope.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology
Incentives Program

Contractor:

2949903 Canada Inc.
118 Valley Drive
Wakefield (Quebec)
J0X 3G0

CIDN:

1444 0200001

PLANCHERS FLOTTANTS RÉSIDENTIELS

Objet :

Étudier l'influence du fractionnement et du facteur de forme sur le comportement des matériaux anti-vibratoires destinés aux planchers flottants durs.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales et économiques
Programme d'encouragement à la technologie du bâtiment résidentiel

Contractant :

Acoustec Inc.
Suite 103
925, rue Newton
Québec (Québec)
G1P 4M2

NIC :

1442 0200001

RENOVATION STRATEGIES FOR BRICK VENEER STEEL STUD WALL CONSTRUCTION.

Prepared by M.A. Postma, C.I. Wegner, and E.F.P. Burnett, Building Engineering Group, University of Waterloo with assistance from Trow Consulting Engineers Ltd. Prepared for Housing Innovation Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1992-1994, i.e. 1996. 5 volumes.

A research and development contract was awarded to the Building Engineering Group (BEG) by CMHC to assess methods of repairing brick veneer/steel stud (BV/SS) walls. The primary objective of this multi-task research project was to develop various strategies for the remediation and, thus, the control or avoidance of problems in existing BV/SS wall systems. A number of tasks were formulated and the following five task reports have been produced:

Task 1: Brick Ties - Options for Remediation. The main objective of the first task of the research project was to identify, demonstrate, assess and document methods of providing supplemental ties on BV/SS buildings. Of the eleven remedial strategies considered, seven tie systems were exterior installations (or fixes) and four were interior approaches.

Task 2: Four Remedial Tie Systems - Development and Conformance Testing. This task involved a test program to establish and document the structural performance of four retrofit tie systems; two methods permitted installation from inside the building (interior fixes) and two were exterior repair methods (exterior fixes). These four tie systems were chosen from the eleven considered in Task 1. Numerous design and code related issues are addressed in detail in the Task 2 report.

Task 3: Some Performance Considerations. This task involved the testing and/or assessment of the likely performance of BV/SS walls after remediation with particular regard to considerations such as thermal bridging, condensation, drainage, corrosion and stiffness (both flexural and torsional).

Task 4: Dinal Remedial Tie System. This task involved the testing and assessment of the Dinal tie system for the purpose of tie remediation. The Dinal tie was not available when Task 1 and 2 were initiated and the Task 4 report should be regarded as a supplement to the Task 2 report.

Task 5: Summary Report. This report synthesizes the work done in Tasks 1, 2, 3, and 4 and is written for a wider audience than the research community.

Ongoing Projects/Projets en cours

PREPARATION OF BEST PRACTICE GUIDE FOR FLASHING DETAILS, MASONRY VENEER/ CONCRETE BLOCK CONSTRUCTION AND WOODFRAME CONSTRUCTION

Objective:

To prepare three guides on building envelope design:
1) a 'best practice' guide for concrete block exterior wall construction; 2) a 'best practice' guide for various exterior wall assemblies with wood frame construction; 3) a 'best practice' guide for the flashing of wood,

concrete and steel frame building envelopes. The documents will contain details, specifications, sequence of construction and information on inspection and commissioning.

CMHC Project Officer:

S. Marshall

Division:

Technical Policy and Research
Division

Contractor:

Robert Halsall &
Associates/Otto & Bryden Arch.
210 Gladstone Avenue
Ottawa, Ontario
K2P 0Y6

CIDN:

0974 0300001

CONCRETE/BÉTON

Ongoing Projects/Projets en cours

DEVELOPMENT OF A NEW EDITION OF THE STANDARD FOR CONCRETE CONSTRUCTION FOR HOUSING AND SMALL BUILDINGS (CSA A438)

Objective:

To carry out the development of a new edition of the standard for concrete construction for housing and small buildings (CSA A438).

CMHC Project Officer:

J. Robar

Division:

Technical Policy and Research
Division

Contractor:

Canadian Standards Association
178 Rexdale Boulevard
Toronto, Ontario
M9W 1R3

CIDN:

1259 0200001

CONTAMINATED LANDS/ TERRAINS CONTAMINÉS

Ongoing Projects/Projets en cours

THE REDEVELOPMENT OF CONTAMINATED SITES

Objective:

Identify ways to encourage the redevelopment of contaminated sites.

CMHC Project Officer:

D. Myette

Division:

Social and Economic Policy and
Research

Contractor:

Delcan Corporation
2001 Thurston Drive
P.O. Box 8004
Ottawa, Ontario
K1G 3H6

CIDN:

1574 0200001

COOPERATIVE AND NON-PROFIT HOUSING/ LOGEMENT SANS BUT LUCRATIF ET COOPÉRATIVES

Completed Reports/Rapports terminés

COOPÉRATIVE-ÉQUITÉ : PROBLÉMATIQUE, CONTRAINTES RÉGLEMENTAIRES, ET MOTIVATIONS DES MEMBRES.

Préparé par Marie J. Bouchard, Gilles Roy et Danielle Dunn. Ottawa : Société canadienne d'hypothèques et de logement, 1995. (Programme de subventions de recherche)

Cette recherche, qui se divise en trois parties, explore des pistes qui permettraient de consolider les acquis des coopératives d'habitation locative québécoises de même qu'en soutenir la croissance future. La première partie présente la problématique de la recherche. Les enjeux auxquels se confronte aujourd'hui le secteur coopératif d'habitat locatif sont d'abord exposés. Les grandes lignes de la problématique de recherche sont ensuite présentées. Y sont aussi décrits les trois modèles ayant servi à conduire la recherche : la coopérative avec épargne, la coopérative avec refinancement hypothécaire, la coopérative avec fiducie foncière.

La deuxième partie du rapport expose une analyse de l'encadrement réglementaire du secteur coopératif d'habitation locative. Y sont présentés, sous un angle général d'abord, le type d'encadrement auquel est soumis le secteur, et les contraintes que cet encadrement pose en termes de consolidation et d'auto-développement des coopératives. Les principaux ajustements qu'entraînerait la mise en application des modèles en regard des règles d'action coopérative sont ensuite identifiés. Suivent ensuite les interdictions spécifiques aux conventions d'exploitation des coopératives, en regard de l'implantation éventuelle des modèles étudiés.

La troisième partie du rapport est consacrée aux résultats d'une enquête menée auprès de coopérateurs sur leurs motivations à adopter éventuellement l'un ou l'autre des modèles. Y sont d'abord traités des mécanismes par lesquels la formule coopérative en habitation peut produire une accumulation patrimoniale. Ensuite, les impressions des répondants quant aux modèles étudiés sont exposées. Puis, les préférences des répondants en regard d'une éventuelle utilisation de la valeur patrimoniale sont décrites. Enfin, y sont recensées les réactions que suscite l'idée d'intercoopération financière chez les répondants.

**INTÉGRATION DES
MEMBRES PRATIQUES
DE GESTION DES
COOPERATIVES
D'HABITATION**

Objet :

La recherche vise à étudier les processus d'intégration et d'habitation au sein des pratiques de gestion en milieu coopérative d'habitation.

Agent de projet pour la SCHL :

N. Gervais

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Madame Marie J. Bouchard
Université du Québec à Montréal
Case postale 6192
Succursale Centre-ville
Montréal (Québec)
H3C 4R2

NIC :

1451 0200001

**TRAINING & NON-PROFIT
HOUSING ASSOCIATIONS**

Objective:

Contribution to create a self-sustaining program to establish a consistent and coherent approach to education and training for staff and volunteer board members of non-profit housing associations across Canada.

CMHC Project Officer:

B. Lortie

Division:

Direct Portfolio Operations
Division

Contractor:

Canadian Housing and Renewal
Association
251 Laurier Avenue West
Suite 401
Ottawa, Ontario
K1P 5J6

CIDN:

1467 1501001
1467 1500001

DISABLED/HANDICAPÉS

Completed Reports/Rapports terminés

EVALUATION ASSESSMENT REPORT: CMHC'S ACTIVITIES UNDER THE NATIONAL STRATEGY FOR THE INTEGRATION OF PERSONS WITH DISABILITIES: DRAFT

Prepared by Program Evaluation Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1994.

An evaluation assessment report provides the terms of reference for program evaluation at Canada Mortgage and Housing Corporation. This assessment report is being prepared for the evaluation of the Home Adaptations for Seniors' Independence (HASI) program and the research, demonstration and professional advice initiatives undertaken by CMHC under the National Strategy for the Integration of Persons with Disabilities. It describes the background, design and delivery features, and current activities for both HASI and the research and demonstration initiatives. It also defines the critical issues to be considered in the evaluation and presents the analytical framework for addressing these issues.

The evaluation will assess whether CMHC's initiatives were the most appropriate response given the objective of the National Strategy and the needs of seniors with diminishing abilities, the performance of the programs in terms of design, implementation and results, and whether there are alternative ways to meet the housing needs of persons with disabilities. In other words, the evaluation will assess the relevance, success and cost-effectiveness of CMHC's activities under the National Strategy.

NOTE : Aussi disponible en français sous le titre : *Rapport de l'étude préparatoire à l'évaluation : activités de la SCHL, dans le cadre de la Stratégie nationale pour l'intégration des personnes handicapées.*

HOUSING FOR PERSONS WITH DISABILITIES.

Ottawa: Canada Mortgage and Housing Corporation, 1996. (NHA 5467)

NOTE: Available from: EDM/CMHC, P.O. Box 3077, Markham, ON, L3R 6G4,
Tel.: 1-800-668-CMHC. **Price \$11.99 plus GST and handling charges.

The intent of this publication is to provide design information that will stimulate appropriate solutions in a broad range of residential accommodation for persons with disabilities. It features new design practices and technologies, includes schematics and illustrations and presents current design and building code standards.

NOTE : Aussi disponible en français sous le titre : *Logements pour les personnes handicapées. (LNH 5468)*

LOGEMENT POUR LES PERSONNES HANDICAPÉES.

Ottawa : Société canadienne d'hypothèques et de logement, 1996. (LNH 5468)

NOTE : Disponible par la poste : EDM/SCHL, C.P. 3077, Markham, ON, L3R 6G4,
Tél.: 1-800-463-SCHL. **Prix: 11,99\$ + TPS + frais d'expédition.

Ce document se veut une source d'information en conception offrant des solutions appropriées à la conception pour une vaste gamme de logements pour les personnes handicapées. Il fait état de nouvelles méthodes et techniques de conception, comporte des schémas et des illustrations, et présente les normes en vigueur en conception et les exigences du code du bâtiment.

NOTE: Also available in English under the title : *Housing for Persons with Disabilities* (NHA 5467)

RAPPORT DE L'ÉTUDE PRÉPARATOIRE À L'ÉVALUATION : ACTIVITÉS DE LA SCHL DANS LE CADRE DE LA STRATÉGIE NATIONALE POUR L'INTÉGRATION DES PERSONNES HANDICAPÉES.

Préparé par la Division de l'évaluation de programme, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1994.

Le rapport de l'étude préparatoire à l'évaluation présente le mandat de l'évaluation de programme à la Société canadienne d'hypothèques et de logement. Ce rapport est préparé pour l'évaluation du programme Logements adaptés : aînés autonomes (LAAA) et des professionnels entreprises par la SCHL dans le cadre de la Stratégie nationale pour l'intégration des personnes handicapées. Il décrit l'historique, la conception et les caractéristiques d'application, ainsi que les activités courantes du programme LAAA et les initiatives de recherche et de démonstration. Il définit également les questions essentielles dont il faut tenir compte dans l'évaluation et présente la structure analytique permettant de les traiter.

L'évaluation permettra de déterminer si les initiatives de la SCHL étaient la réponse la plus appropriée compte tenu de l'objectif de la Stratégie nationale, des besoins des aînés dont les capacités diminuent, du rendement des programmes en ce qui concerne la conception, la mise en oeuvre et les résultats, et s'il existe un meilleur moyen de satisfaire les besoins de logement des personnes handicapées. Autrement dit, elle permettra d'évaluer la pertinence, le degré de réussite et la rentabilité des activités entreprises par la SCHL dans le cadre de la Stratégie nationale.

NOTE: Also available in English under the title: *Evaluation Assessment Report: CMHC's Activities under the National Strategy for the Integration of Persons with Disabilities*

Ongoing Projects/Projets en cours

HOUSING NEEDS OF PEOPLE WITH DISABILITIES

Objective:

To provide a profile of the housing characteristics and needs of people with disabilities using data from the 1991 Census and post-censal Health and Activity Limitations Survey (HALS).

CMHC Project Officer:

J. Angus

Division:

Social and Economic Policy and
Research

Contractor:

ARK Research Associates
165 Hinton Avenue North
Ottawa, Ontario
K1Y 0Z9

CIDN:

1045 0200003

THE COMPLETE GUIDE TO GARDEN SUITES.

Prepared by Allan E. Brass Associates Inc., Lovatt Planning Consultants, and Smith, Lyons, Torrance, Stevenson & Mayer. Ottawa: Canada Mortgage and Housing Corporation, 1995. (NHA 6853)

NOTE: Available from: EDM/CMHC, P.O. Box 3077, Markham, ON, L3R 6G4.
Tel.: 1-800-668-CMHC. **Price \$24.99 plus G.S.T. and handling charges.

This Guide which is divided into eight parts is intended to foster a wider familiarity and acceptance of garden suites as a suitable housing option for senior Canadians and persons with disabilities. More specifically, the Guide is intended to facilitate the deployment and control of garden suites by describing their physical and functional characteristics, their installation requirements, and the basic administrative procedures that are needed to process municipal applications for garden suites.

NOTE : Aussi disponible en français sous le titre : *Pavillons-jardins : guide complet.*
(LNH 6854)

PAVILLONS-JARDINS : GUIDE COMPLET.

Préparé par Allan E. Brass Associates Inc., Lovatt Planning Consultants et Smith, Lyons, Torrance, Stevenson & Mayer. Ottawa : Société canadienne d'hypothèques et de logement, 1995. (LNH 6854)

NOTE : Disponible par la poste : EDM/SCHL, C.P. 3077, Markham, ON, L3R 6G4.
Tél. : 1-800-463-SCHL. **Prix: 24,99\$ + TPS + frais d'expédition.

Ce Guide qui se divise en huit parties vise à faire connaître les pavillons-jardins et à favoriser leur acceptation en tant que forme de logement convenant aux Canadiens âgés ou handicapés. Plus précisément, ce guide est destiné à faciliter l'implantation et la réglementation des pavillons-jardins par la description de leurs caractéristiques physiques et fonctionnelles, de leurs contraintes d'installation et des dispositions administratives de base dont les municipalités ont besoin pour traiter les demandes d'installation.

NOTE: Also available in English under the title: *The Complete Guide to Garden Suites*
(NHA 6853)

ELDERLY/PERSONNES ÂGÉES

Completed Reports/Rapports terminés

POLICIES AND REGULATIONS FOR SENIORS' HOUSING: CASE STUDY = POLITIQUES ET RÉGLEMENTATION CONCERNANT LE LOGEMENT DES ÂÎNÉS : ÉTUDE DE CAS.

Affordability and Choice Today (A.C.T.) Case Study Project / City of Burlington, Burlington, Ontario. Prepared by Energy Pathways Inc. Prepared for the Federation of Canadian Municipalities, Canadian Home Builders' Association, Canadian Housing and Renewal Association and Canada Mortgage and Housing Corporation. Ottawa: The Associations: The Federation: The Corporation, 1995.

In consultation with community and non-profit organizations, the City of Burlington reviewed its policies and regulations to facilitate the development of housing that would meet seniors' needs. The project was designed primarily to address regulations that have a direct bearing on the land development approval process.

The comprehensive review undertaken by Burlington's Planning Department resulted in several amendments to the City's zoning by-law. The project also achieved the objective of streamlining the approval process. Applications for seniors' housing projects no longer need to be examined on a site-specific basis. With many new types of seniors' housing and related standards now being addressed in the City's zoning by-law, the potential for a wider range of housing options for seniors readily exists.

Planning staff anticipate that the revised by-law will enable them to process most applications for seniors' housing projects within about eight weeks. This represents a marked decrease from the approximately six months required previously to accommodate rezoning.

NOTE: Bilingual/bilingue

POLITIQUES ET RÉGLEMENTATION CONCERNANT LE LOGEMENT DES ÂÎNÉS : ÉTUDE DE CAS = POLICIES AND REGULATIONS FOR SENIORS' HOUSING: CASE STUDY.

Abordabilité et choix toujours (A.C.T.) projet d'étude de cas / Ville de Burlington, Burlington (Ontario). Préparé par Energy Pathways Inc. Préparé pour La Fédération canadienne des municipalités, L'Association canadienne des constructeurs d'habitations, L'Association canadienne d'habitation et de rénovation urbaine et La Société canadienne d'hypothèques et de logement. Ottawa : Les Associations : La Fédération : La Société, 1995.

De concert avec les organismes communautaires et sans but lucratif, la Ville de Burlington a procédé à la révision de ses politiques et règlements afin de favoriser des aménagements résidentiels qui répondraient aux besoins des aînés. Au départ, le projet visait les règlements qui avaient une incidence directe sur le processus d'approbation en matière d'aménagement foncier.

ELDERLY/PERSONNES ÂGÉES

Completed Reports/Rapports terminés

L'étude globale entreprise par le service d'urbanisme de Burlington a donné lieu à de nombreuses modifications aux règlements municipaux de zonage. Le projet a également atteint son objectif qui consistait à rationaliser le processus d'approbation. Il n'était plus nécessaire, désormais, d'étudier les demandes relatives au logement des aînés en fonction de chaque emplacement. Comme les règlements municipaux de zonage englobent maintenant de nombreux nouveaux genres de logement pour les personnes âgées ainsi que les normes connexes, il est actuellement possible d'offrir à ces personnes un plus vaste choix en matière de logement.

Le service d'urbanisme prévoit que la réglementation révisée leur permettra de traiter la plupart des demandes relatives à des aménagements résidentiels pour personnes âgées dans un délai d'environ huit semaines comparativement aux six mois auparavant nécessaires pour procéder au rezonage.

NOTE : Bilingue/bilingual

SAFE AT HOME: A GUIDE TO PERSONAL RESPONSE SERVICES.

Prepared by Francine Trickey and François Renaud. Ottawa: Canada Mortgage and Housing Corporation; Montréal: Régie régionale de la santé et des services sociaux de Montréal-Centre; Québec: Société d'habitation du Québec, 1995. (NHA 6837)

More and more seniors and people with disabilities are choosing to live independently in their own homes. Personal response services can enhance their feeling of security and ensure that they have access to help and support in case of emergency. This publication describes the types of services that have been designed to help seniors and people with disabilities feel safe at home. It will allow them to identify personal services that are, or could be, right for them.

NOTE : Aussi disponible en français sous le titre : *Vivre à domicile en toute confiance : guide sur le choix d'un service de surveillance et d'aide en cas de besoin.* (LNH 6838)

VIVRE À DOMICILE EN TOUTE CONFIANCE : GUIDE SUR LE CHOIX D'UN SERVICE DE SURVEILLANCE ET D'AIDE EN CAS DE BESOIN.

Préparé par Francine Trickey et François Renaud. Ottawa : Société canadienne d'hypothèques et de logement; Montréal : Régie régionale de la santé et des services sociaux de Montréal-Centre; Québec : Société d'habitation du Québec, 1995. (LNH 6838)

Les aînés et les personnes ayant des incapacités choisissent de plus en plus de vivre de façon autonome dans leur propre logement. Les services de surveillance peuvent accroître leur sentiment de sécurité en leur donnant l'assurance d'avoir l'aide et le soutien requis en cas de besoin. Ce guide décrit les principaux services de surveillance et d'aide que ces personnes peuvent utiliser afin de vivre à domicile en toute confiance. Il leur permettra d'identifier le type de service qui répond, ou devrait répondre, le mieux à leurs besoins.

NOTE: Also available in English under the title: *Safe at Home: A Guide to Personal Response Services.* (NHA 6837)

Ongoing Projects/Projets en cours

A GUIDE TO PLANNING, DESIGNING, DEVELOPING, MARKETING AND MANAGING HOUSING FOR OLDER CANADIANS

Objective:

To produce an easy to follow and practical guide document that will assist both non-profit groups and the private sector in planning, designing, developing, marketing and managing a wide range of housing choices for older Canadians.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and Research

Contractor:

Baycrest Centre for Geriatric Care
3560 Bathurst Street
North York, Ontario
M6A 2E1

CIDN:

0869 0200001

NEIGHBOURHOOD GROUP HOMES: THE PLANNING, DESIGN AND DEVELOPMENT PROCESS

Objective:

To produce a number of key recommendations, guidelines, and development strategies that will shorten the learning curve for the volunteers, bureaucrats and professionals who usually develop small group homes for seniors.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Ms. Clarke and Dr. Gutman
Gerontology Research Centre
Simon Fraser University
2800 - 515 West Hastings Street
Vancouver, British Columbia
V6B 5K3

CIDN:

1453 0200001

USER SATISFACTION STUDY OF HOUSING OPTIONS FOR OLDER CANADIANS

Objective:

To carry out user satisfaction studies of some of the newer housing options that are currently available to older Canadians, and to produce an objective and detailed report based on the results of the research.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and Research

Contractor:

Simon Fraser University
Gerontology Research Centre
2800-515 West Hastings Street
Vancouver, British Columbia
V6B 5K3

CIDN:

1583 0200001

VIVRE À DOMICILE OU EN RÉSIDENCE : UN DÉFI POUR LES AINÉS ET LES INTERVENANTS

Objet:

To examine for the Saguenay region in Québec, the circumstances, constraints, limits and difficulties faced by clients and caregiver organizations receiving and providing homecare services.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Danielle Maltais
555, boulevard de l'Université
Université du Québec à Chicoutimi
Chicoutimi (Québec)
G7H 2B1

CIDN:

1641 0200001

WORKSHOP ON HOUSING OPTIONS FOR CANADIANS WITH DEMENTIA

Objective:

To increase public awareness of the range and types of housing options that are, and could be, available to Canadians with dementia, by giving prominence to information on housing, support technology, and in particular by providing information on relevant research that CMHC is currently undertaking.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and Research

Contractor:

Alzheimer Society of Canada
1320 Yonge Street
Toronto, Ontario
M4T 1X2

CIDN:

1591 0200001

Ongoing Projects/Projets en cours

LOG HOUSING

AIR-SEALING DETAILS

Objective:

To produce illustrations and text describing air-sealing details for rectangular-milled and round scribed log-wall house construction systems for inclusion in the document "The Details of Air-Barrier Systems for Houses" as referenced in the upcoming edition of the National Energy Code for Housing.

CMHC Project Officer:

R. Duncan

Division:

Technical Policy and Research
Division

Contractor:

Jools Development
P.O. Box 107
Quadville, Ontario
L0J 2G0

CIDN:

1578 0300001

WOOD FUELED DOMESTIC ENERGY CONVERSION SYSTEMS

Objective:

To carry out a study of wood fueled domestic energy conversion systems.

CMHC Project Officer:

P. Russell

Division:

Technical Policy and Research
Division

Contractor:

Allen Associates
400 Mount Pleasant Road
Suite 5
Toronto, Ontario
M4S 2L6

CIDN:

1423 0200001

ENVIRONMENTAL POLLUTION AND CONTROL/ POLLUTION DE L'ENVIRONNEMENT ET SON CONTRÔLE

Completed Reports/Rapports terminés

HEALTHY MATERIALS: A COMMUNIQUÉ ON MATERIAL EMISSION TESTING AND STANDARDS ACTIVITIES.

Issue No. 4. Ottawa: Canada Mortgage and Housing Corporation, Winter/Spring 1996.

This fourth issue of Healthy Materials continues coverage of recent and ongoing emissions research in Canada, the U.S. and Europe. The initial activities of the National Research Council's multi-agency Consortium and the series of jointly-funded projects sponsored by the Task Force on Material Emissions underscore the effectiveness of collaboration between public sector research agencies and the manufacturing industry. This is a theme which has also characterized the development of Danish and Swedish labelling programs and the dialogues held by the U.S. EPA with the carpet and paint industries.

This issue also provides summaries of the many emissions-related papers presented at the "Healthy Buildings '95" conference in Milan. Jim White's editorial focuses attention on the ongoing challenge of variability in emission test results. The articles on sources of information on low-emission materials and on the recently released "Building Materials for the Environmentally Hypersensitive" highlight the growing body of knowledge now available to practitioners.

NOTE : Aussi disponible en français sous le titre : *Matériaux sains : bulletin sur les essais et normes d'émission des matériaux.*

ENVIRONMENTAL POLLUTION AND CONTROL/ POLLUTION DE L'ENVIRONNEMENT ET SON CONTRÔLE

Completed Reports/Rapports terminés

LOW COST DETECTOR FOR VOCs (TVOC) FOR THE HOMEOWNER AND HOME INSPECTOR (ONGOING DEVELOPMENT).

Prepared by George Vandrish and Lyle Davidson, Intruscience Ltd. Ottawa: Canada Mortgage and Housing Corporation, 1994, i.e. 1996. (Housing Technology Incentives Program).

Commercial and scientific literature on sensors and instruments for VOC (Volatile Organic Carbon) sensing was reviewed and summarized. The low cost Taguchi sensor is being employed in substantial numbers of detectors and ventilation controllers, but it is humidity and temperature sensitive, and may be insensitive at the VOC concentrations typically found indoors. No other low-cost commercially available sensor, capable of detecting VOCs at the sub-ppm levels typical of indoor air, was identified.

Surface ionization, however, was identified as a promising alternative technology to the Taguchi sensor, and three prototype VOC detectors of the passive type, employing surface ionization sensors, were constructed and tested. The prototype detectors were tested with several aromatic hydrocarbons (xylene, toluene), an alkane (hexane), an amine (tributylamine), ketones (acetone, methyl ethyl ketone) and an aldehyde (formaldehyde). Sensitivity, minimum detectable level, linearity, range, reproducibility and the influence of vibration, power supply drift, humidity, and temperature, were investigated. The response to cleaning agents commonly employed in the household, to perfumes and to cigarette smoke was also established.

In general, large molecules such as xylene, were easily detected in the sub-ppm range while smaller molecules such as formaldehyde and acetone were more difficult to detect. The concentration of many cleaning agents, furniture polishes, and common solvents, when used indoors, following recommended practice, will quickly reach a significant easily measurable concentration.

Performance was unaffected over the temperature and humidity range studied and one of the prototypes operated continuously over a six-month period without any apparent change in operating characteristics. Rise time and recovery after exposure to high concentrations of VOC was instantaneous. A warm-up period of about 30 minutes is required if the sensor is turned off for several days, but the warm-up period rapidly decreases to 5-10 minutes for an off period of several hours.

ENVIRONMENTAL POLLUTION AND CONTROL/ POLLUTION DE L'ENVIRONNEMENT ET SON CONTRÔLE

Completed Reports/Rapports terminés

LOW COST DETECTOR OF FORMALDEHYDE AND IONIZABLE VOCs (TVOC) FOR THE HOMEOWNER AND HOME INSPECTOR.

Prepared by George Vandrish and Lyle Davidson, Instruscience Ltd. Ottawa: Canada Mortgage and Housing Corporation, 1994, i.e. 1996. (Housing Technology Incentives Program).

The purpose of this research was to find new and novel approaches for the measurement of formaldehyde at levels typically found indoors. The literature review focused, in particular, on identifying simple low-cost methods for ionizing molecules. Two methods, one based on a heated platinum catalyst, and a second, based on vacuum ultraviolet light, were selected for further study. Both sources produce ions only in the presence of organic materials and, when combined with a low-cost ion detector such as an electroscope, provide the basis for sensitive low-cost detectors for formaldehyde and VOCs.

This research project covered the development and testing of several portable detectors based on the platinum catalyst and vacuum ultraviolet (VUV) source-electroscope combinations. The research effectively demonstrated that both technologies can detect volatile organic carbon materials and formaldehyde at very low concentrations. The performance of both prototypes was better than expected and, it was possible to measure formaldehyde at or below 0.05 parts per million, the Health and Welfare Canada long-term exposure guideline. Several modifications were proposed which should increase sensitivity and lower the minimum level detectable even further, but more care must be taken to minimize chemical background and, to control the experimental conditions.

The prototypes were not selective and responded to acetone, a typical volatile organic carbon, as well as to formaldehyde. Although some additional work is required to make the detectors more selective, this research has proven the feasibility of developing simple, sensitive, low-cost detectors for volatile organic carbon materials. There is a need at the present time for low-cost, survey-type detectors of this nature.

MATÉRIAUX SAINS : BULLETIN SUR LES ESSAIS ET NORMES D'ÉMISSION DES MATÉRIAUX.

no. 4. Ottawa : Société canadienne d'hypothèques et de logement, hiver printemps 1996.

Le quatrième numéro de Matériaux sains se consacre encore aux recherches sur les émissions qui ont été effectuées dernièrement ou qui se poursuivent au Canada, aux États-Unis et en Europe. Les premières activités du consortium multi-agences du Conseil national de recherches de même que la série de projets bénéficiant d'un financement commun parrainés par le Groupe de travail sur les émissions des matériaux mettent en évidence l'efficacité de la collaboration entre les organismes de recherche du secteur public et l'industrie manufacturière. C'est le thème qui a également caractérisé l'élaboration des programmes d'homologation danois et suédois ainsi que le dialogue qu'a

ENVIRONMENTAL POLLUTION AND CONTROL/ POLLUTION DE L'ENVIRONNEMENT ET SON CONTRÔLE

Completed Reports/Rapports terminés

Ce numéro résume les nombreux documents traitant des émissions qui ont été présentés lors de la Conférence 95 sur les bâtiments sains tenue à Milan. L'éditorial de Jim White attire l'attention sur le défi que représente en tout temps la variabilité des résultats d'essais correspondants. Les articles portant sur les sources d'information quant aux matériaux à faible taux d'émission et le récent guide «Matériaux de construction pour les logements des personnes hypersensibles» font ressortir l'accroissement de la masse de connaissances que possèdent maintenant les praticiens.

NOTE: Also available in English under the title: *Healthy Materials: A Communiqué on Material Emission Testing and Standards Activities.*

ENVIRONMENTAL SKILLS REGISTER, GREEN BUILDING INFORMATION COUNCIL (GBIC)

Objective:

To develop an Environmental Skills Register (ESR) that incorporates the interests of CMHC.

CMHC Project Officer:

P. Russell

Division:

Technical Policy and Research
Division

Contractor:

Green Building Information
Council
130 Lewis Street
Ottawa, Ontario
K2P 0S7

CIDN:

1698 0300001

EVALUATION OF POLLUTANT SOURCE STRENGTHS AND CONTROL STRATEGIES IN CONVENTIONAL AND R2000 HOUSES

Objective:

Conduct a study to evaluate the pollutant source strengths and control strategies in three new conventional and three new R-2000 houses.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

Ortech International
2395 Speakman Drive
Mississauga, Ontario
L5K 1B3

CIDN:

1585 0200001

METHODS FOR TRACE ANALYSIS OF FUNGAL BIOMASS

Objective:

Develop micro methods for the supercritical analysis of micro amounts of ergosterol; develop micro methods for the direct analysis of B1, 3 glucan to determine if it is the feasible approach; analyze samples collected.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research
Division

Contractor:

Agriculture Canada
K. Wheatby Building
Ottawa, Ontario
K1A 0C6

CIDN:

1243 0201001

**REVIEW OF PAINT
EMISSION STUDIES USING
TRADITIONAL METHODS
AND RECENT CHAMBER
STUDIES**

Objective:

To search international databases; review studies; evaluate the significance of the findings; draft a CSIRO document; and have the document reviewed by the industry.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research
Division

Contractor:

CSIRO, Australia
Graham Road
P.O. Box 56
Highett, VC 3190

CIDN:

1244 0201006

**STUDY OF
ENVIRONMENTAL (AND
RELATED) LABELING
ORGANIZATIONS IN THE
CANADIAN MARKETPLACE**

Objective:

Conduct a study that will provide comparative information on major organizations involved in research, development or promotion of guidelines, standards or rating systems that are used to evaluate environmental attributes of products.

CMHC Project Officer:

P. Gallant

Division:

Social and Economic Policy and
Research Division

Contractor:

Environment Canada
351 St. Joseph Blvd.
9th Floor
Ottawa, Ontario
K1A 0H3

CIDN:

1484 0200001

**A SURVEY OF
ELECTROMAGNETIC FIELD
LEVELS IN CANADIAN
HOUSING**

Objective:

To review the state-of-the-art in knowledge and housing research into EMF and prepare an interim report, to conduct a field survey of EMF levels in representative housing, and to prepare a report on the findings with recommendations for remedial measures.

CMHC Project Officer:

C. Ives

Division:

Technical Policy and Research
Division

Contractor:

The Planetary Association for
Clean Energy Inc.
100 Bronson Avenue
Suite 1001
Ottawa, Ontario
K1T 6G8

CIDN:

1051 0200001

FAMILY VIOLENCE/VIOLENCE FAMILIALE

Completed Reports/Rapports terminés

ÉVALUATION DE L'OPÉRATION REFUGE : LES POINTS SAILLANTS DES ÉTUDES DE CAS.

Préparé par la Division de l'évaluation de programme, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1995.

Dans le cadre de l'initiative fédérale en matière de violence familiale, la Société canadienne d'hypothèques et de logement (SCHL) a entrepris l'évaluation de l'Opération refuge. Cette évaluation comprenait plus d'une année de suivi du programme (système d'information sur la clientèle), de même que des enquêtes et une recherche qualitative. Des études de cas ont été effectuées afin de recueillir des renseignements qualitatifs servant à compléter et à appuyer les statistiques contenues dans la base de données. Ces études de cas visaient surtout à examiner trois aspects : les besoins des collectivités en matière de refuges et de services destinés aux femmes et aux enfants victimes de violence familiale, les retombées sur ces collectivités, y compris l'incidence liée à l'arrivée d'une maison d'hébergement dans une collectivité, et les modèles de services adoptés pour venir en aide aux victimes de violence familiale. Ce rapport comprend les études de cas utilisées aux fins de l'analyse de l'Opération refuge.

NOTE: Also available in English under the title: *Project Haven Evaluation: Case Study Highlights.*

PROJECT HAVEN EVALUATION: CASE STUDY HIGHLIGHTS.

Prepared by Program Evaluation Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.

As part of its responsibilities under the Federal Family Violence Initiatives, Canada Mortgage and Housing Corporation (CMHC) has undertaken an evaluation of the Project Haven Program. The overall evaluation included over a year of program monitoring (Client Information System), as well as surveys and qualitative research. Case studies were undertaken to collect qualitative information to supplement and support the statistical findings in the database. The three main areas addressed by the case studies included community needs related to the provision of shelters and services for women and children experiencing family violence, community impacts including the effects of locating the shelter for family violence in communities, and providing a description of service models adopted to address family violence. This report includes highlights of the case study reports prepared for the evaluation of the Project Haven Program.

NOTE : Aussi disponible en français sous le titre : *Évaluation de l'Opération refuge : les points saillants des études de cas.*

FIRE PREVENTION/ INCENDIES -- PRÉVENTION

Ongoing Projects/Projets en cours

IT COULD NEVER HAPPEN TO ME: HIGH RISE FIRE SAFETY EDUCATION CAMPAIGN

Objective:

To develop, produce and distribute materials in support of a national high rise fire safety education campaign for use by fire service personnel and other stakeholders of fire prevention, managers of high-rise buildings, broadcasters, and the general public.

CMHC Project Officer:

T. Green

Division:

Technical Policy and Research
Division

Contractor:

Carleton Productions
International Incorporated
P.O. Box 5069
Merivale Depot Broadcasting
House
3rd Floor
1500 Merivale Road
Ottawa, Ontario
K2C 3H3

CIDN:

1610 0300001

HEATING & VENTILATION/ CHAUFFAGE ET VENTILATION

Ongoing Projects/Projets en cours

DRAIN GAIN

Objective:

To test and evaluate the drain gain, a waste water heat recovery exchanger and storage device aimed at the residential market.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Winston MacKelvie
Box 1156
Knowlton (Québec)
J0E 1V0

CIDN:

1443 0200001

HVAC DESIGN AND INSTALLATION PRACTICES IN MID AND HIGH-RISE BUILDINGS

Objective:

To conduct a study to evaluate the changes required to existing HVAC design and installation practices in mid and high-rise buildings in order to ensure compliance with the 1995 National Building and Energy Codes and to study the performance of ventilation systems within these types of buildings.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research Division

Contractor:

Sheltair Scientific Ltd.
#2 - 3661 West 4th Avenue
Vancouver, British Columbia
V6R 1P2

CIDN:

1424 0200001

IDENTIFYING AND REMOVING POLLUTANTS FROM HEAT RECOVERY VENTILATORS

Objective:

Determine whether dedicated ventilation systems harbour unhealthy levels of dust, mould and/or fungi; whether existing duct cleaning methods are successful at lowering those levels; and to develop recommendations and guidelines for builders and homeowners for the maintenance of dedicated residential systems.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Terry Watters
Rural Route #3
Comp 308
Wolfville, Nova Scotia
B0P 1X0

CIDN:

1652 0200001

INVESTIGATE HEATING AND VENTILATING SYSTEMS FOR REMOTE HOUSING

Objective:

To conduct a study to investigate heating and ventilating systems for remote housing.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research Division

Contractor:

Howell-Mayhew Engineering Inc.
15006-103 Avenue
Edmonton, Alberta
T5P 0N8

CIDN:

1481 0200001

OPTIMIZE RESIDENTIAL HVAC DUCTWORK SYSTEMS

Objective:

To conduct a study to assess the potential to optimize residential HVAC ductwork systems.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research Division

Contractor:

Allen Associates
400 Mount Pleasant Road
Suite 5
Toronto, Ontario
M4S 2L6

CIDN:

1431 0200001

HEATING & VENTILATION/ CHAUFFAGE ET VENTILATION

Ongoing Projects/Projets en cours

OVERHEATING AS A FACTOR IN HOUSE DESIGN

Objective:

To create the tools for providing advice to house designers on the subject of overheating.

CMHC Project Officer:

F. Grammenos

Division:

Technical Policy and Research
Division

Contractor:

SAR Engineering Limited
8884-15th Avenue
Burnaby, British Columbia
V3N 1Y3

CIDN:

1567 0200001

SUPPORT FOR THE HEAT EXCHANGER LEAKAGE STUDY

Objective:

To carry out "support for the heat exchanger leakage study".

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research
Division

Contractor:

Geddes Enterprises
45 Massey Street
Brampton, Ontario
L6S 2V8

CIDN:

1505 0200002

SURVEY OF NORTH AMERICAN FURNACE HEAT EXCHANGER TEST METHODS

Objective:

To survey Canadian and American gas utilities to find out what methods they use in field testing for heat exchanger leakage; obtain copies of test protocol and equipment lists; establish field use, acceptance and success of tests; analyze the data collected and recommend test methods that should be used in Canada.

CMHC Project Officer:

Don Fugler

Division:

Technical Policy and Research
Division

Contractor:

Canadian Gas Research Institute
55 Scarsdale Road
Toronto, Ontario
M3B 2R3

CIDN:

1505 0200001

TEST-RIG FOR EVALUATING RESIDENTIAL MOTOR-FAN SET PERFORMANCE

Objective:

Development and testing of a device for testing the performance of residential ventilating equipment.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research
Division
Panel on Energy Research &
Development

Contractor:

Sheltair Scientific Ltd.
2-3661 West 4th Avenue
Vancouver, British Columbia
V6R 1P2

CIDN:

1368 0800001
1368 0200001

TESTING EQUIPMENT FOR CONFIRMATION OF AIR TIGHTNESS IN AIR BARRIERS

Objective:

To develop and test a working prototype chamber air leakage detection device.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
Housing Technology Incentives
Program

Contractor:

Retro-Specs Limited
108 Paramount Road
Winnipeg, Manitoba
R2X 2W3

CIDN:

1503 0200001

HIGH-RISE CONSTRUCTION/ CONSTRUCTION D'IMMEUBLES DE GRANDE HAUTEUR

Ongoing Projects/Projets en cours

COMPARTMENTALIZATION OF EXISTING HIGH RISE APARTMENT BUILDINGS

Objective:

Determine the practicality of compartmentalizing existing apartment buildings and determining the effectiveness of compartmentalization on controlling unwanted air change, energy costs and comfort problems.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Mark Lawton Building Science
Specialists and
Morrison Hershfield Limited
2440 Don Reid Drive
Ottawa, Ontario
K1H 8P5

CIDN:

1655 0200001

CONDITION SURVEY OF HIGH-RISE STOCK

Objective:

Establish a research and survey design methodology for assessing the physical condition and state of repair, including the costs of upgrading to extend the longevity, of the high-rise rental housing stock, and to conduct a statistically valid sample survey of that stock in the City of Toronto.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

CIDN:

1561 0300001

DESIGN AND IMPLEMENTATION OF INNOVATIONS AT COLOMBUS HOUSE SHERWOOD PARK, NEAR EDMONTON, ALBERTA

Objective:

Design conception and implementation of the innovations to be integrated into Columbus House, a high-rise residential building that will be constructed in Sherwood Park, near Edmonton, Alberta.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

Contractor:

Howell-Mayhew Engineering
Inc.
15006-103 Avenue
Edmonton, Alberta
T5P 0N8

CIDN:

0840 0302005

DEVELOPMENT AND DELIVERY OF A TRAINING COURSE AND WORKSHOP ON TECHNICAL AUDITS OF MULTI-UNIT RESIDENTIAL BUILDINGS

Objective:

Preparation of an Instructor's manual, a student's manual and the delivery of a pilot workshop

relating to technical audits of multi-unit residential buildings.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

Contractor:

Buchan Lawton Parent Ltd.
Unit 5
5370 Canotek Road
Ottawa, Ontario
K1J 9E6

CIDN:

1537 0300001

EVALUATION OF POLLUTANT SOURCE STRENGTHS AND CONTROL STRATEGIES IN AN INNOVATIVE HIGH-RISE RESIDENTIAL BUILDING

Objective:

To evaluate the pollutant source strengths and control strategies in an innovative residential high-rise building.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division
Panel on Energy Research and
Development

Contractor:

SIRICON
1455 Boulevard Maisonneuve
Ouest
Montréal, Québec
H3G 1M8

CIDN:

1557 0200001
1557 0300001
1557 0800001

LA CLÉ DE VOTRE PREMIÈRE MAISON : D'ÉTAPE EN ÉTAPE : UN GUIDE DÉTAILLÉ À L'INTENTION DES ACCÉDANTS À LA PROPRIÉTÉ.

Ottawa : Société canadienne d'hypothèques et de logement, 1996. (LNH 6876)

NOTE : Disponible par la poste : EDM/SCHL, C.P. 3077, Markham, ON, L3R 6G4,
Tél.: 1-800-463-SCHL ** Prix 9,95 \$ + TPS + frais d'expédition.

Autrefois, l'achat d'une première maison se révélait une tâche fort simple. De nos jours cependant, l'achat d'une propriété peut ressembler à une course à obstacles. La Clé de votre première maison est un guide qui traite en profondeur de tous les aspects inhérents à l'accession à la propriété. Il décrit les types de propriétés disponibles ainsi que les avantages et les désavantages que comporte toute propriété, neuve ou non. On trouve dans le guide plusieurs fiches pratiques à remplir et des listes de vérification pour aider les accédants à la propriété à déterminer : la valeur de la propriété dont ils peuvent se porter acquéreur; leurs besoins en matière de logement; leur situation nette; les coûts exacts de maisons de prix différents; les diverses options hypothécaires; et la mise de fonds initiale et le coût de l'assurance-prêt hypothécaire. Le guide décrit également comment préparer une offre d'achat et la prise de possession de la maison.

NOTE: Also available in English under the title: *Homebuying for Beginners: A Step-by-Step Guide to Help You Buy Your First Home*. (NHA 6876)

HOMEBUYING FOR BEGINNERS: A STEP-BY-STEP GUIDE TO HELP YOU BUY YOUR FIRST HOME.

Ottawa: Canada Mortgage and Housing Corporation, 1996. (NHA 6876) .

NOTE: Available from: EDM/CMHC, P.O. Box 3077, Markham, ON, L3R 6G4,
Tel.: 1-800-668-CMHC **Price: \$9.95 plus G.S.T. and handling charges.

Buying a home used to be straightforward. For a beginner today, however, buying a home is a journey with many twists and turns. Homebuying for Beginners is a workbook which provides in-depth details about every aspect of buying a home. It describes the types of housing that are available as well as the advantages and disadvantages to new and resale homes. Several worksheets and checklists are provided in the guide to help buyers determine: how much they can afford to spend; their housing needs; their net worth; the exact cost of differently priced homes; their various mortgage options; the initial down payment and the cost of mortgage loan insurance. The guide also describes how to prepare an offer to purchase and the closing process.

NOTE : Aussi disponible en français sous le titre : *La Clé de votre première maison : d'étape en étape : une guide détaillé à l'intention des accédants à la propriété*. (LNH 6876)

HOME OWNERSHIP/ HABITATIONS -- POSSESSION

Ongoing Projects/Projets en cours

LITERATURE REVIEW ON LIFE CYCLE TENURE DECISION

Objective:

To undertake a literature review of the theoretical and empirical studies on the life cycle tenure decision.

CMHC Project Officer:

B. Sanscartier

Division:

Social and Economic Policy and
Research
Centre for Future Studies in
Housing and Living
Environments

Contractor:

Marian Steele
Associate Professor - Economics
University of Guelph
Guelph, Ontario
N1G 2W1

CIDN:

1682 0200001

HOMELESSNESS/ SANS-ABRI

Ongoing Projects/Projets en cours

DEVELOPMENT AND TESTING OF A "HOMELESS" DATA COLLECTION AND MANAGEMENT SYSTEM (PHASE 1)

Objective:

Development of requirements for a "Homeless" data collection and management system.

CMHC Project Officers:

B. Baxter; J. Engeland

Division:

Social and Economic Policy and
Research

Contractor:

Ottawa University
School of Psychology
550 Cumberland Street
Ottawa, Ontario
K1N 6N5

CIDN:

1558 0100001

HOUSE CONSTRUCTION/ HABITATIONS-CONSTRUCTION

Ongoing Projects/Projets en cours

HOUSING DE-CONSTRUCTION

Objective:

To investigate and carry out a de-construction procedure on a house to make it more economically and environmentally viable compared to current housing demolition practices.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Design Consultants
2-417 Bronson Avenue
Ottawa, Ontario
K1R 6J6

CIDN:

1439 0200001

AN INFORMATION AND TRAINING NEEDS ANALYSIS FOR THE CANADIAN HOME INSPECTION INDUSTRY

Objective:

Undertake and complete "An Information and Training Needs Analysis for the Canadian Home Inspection Industry."

CMHC Project Officer:

T. Marshall

Division:

Technical Policy and Research Division

Contractor:

Energy Technology Access Group Inc.
2308 Arlington Avenue
Saskatoon, Saskatchewan
S7L 3L3

CIDN:

1539 0300001

STUDY OF SEAM TELEGRAPHING PROBLEMS IN RESIDENTIAL FLOORING

Objective:

Identify and determine what can be done to minimize the seam telegraphing problems in residential flooring currently being experienced by the housing industry across Canada.

CMHC Project Officer:

T. Marshall

Division:

Technical Policy and Research Division

Contractor:

Canadian Home Builders' Association
150 Laurier Avenue West
Suite 200
Ottawa, Ontario
K1P 5J4

CIDN:

1729 0300001

SURVEY OF BUILDING ENVELOPE FAILURES IN WOOD FRAME BUILDINGS IN THE COASTAL CLIMATE AREA OF BRITISH COLUMBIA

Objective:

Produce a study of the causes, and contributory factors resulting in the decay and deterioration of 3 & 4 storey wood frame residential buildings in the coastal climate area of British Columbia.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research Division

Contractor:

Morrison Hershfield Ltd.
#247-4229 Canada Way
Burnaby, British Columbia
V5G 1H3

CIDN:

1569 0300001

HOUSING/LOGEMENT

Ongoing Projects/Projets en cours

CANADIAN TEST OF SURVEY INSTRUMENTS AND INDICATORS OF QUALITY OF LIFE, HEALTH & WELL-BEING IN VARIOUS HOUSING ENVIRONMENTS

Objective:

To develop indicators and survey instruments which will be used to access quality of life in housing environments; to measure the impact on households of housing-based interventions and programs; to provide a standard set of instruments to assess and monitor the health and quality of life experienced by individuals and families; to better understand the contribution of housing and living environments to the quality of life experienced by individuals and families.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre for Future Studies in Housing and Living Environments

Contractor:

University of Winnipeg
Institute of Urban Studies
346 Portage Avenue
Winnipeg, Manitoba
R3C 0C3

CIDN:

1516 0200001

FEASIBILITY STUDY FOR A SURVEY OF CONSUMER INTENTIONS TO BUY OR RENOVATE

Objective:

Undertake and complete a feasibility study for a survey of

consumer intentions to buy or renovate.

CMHC Project Officer:

G. Goy

Division:

Market Analysis Centre

Contractor:

Prairie Research Associates Inc.
300-326 Broadway
Winnipeg, Manitoba
R3C 0S5

CIDN:

1587 1000001

THE INTERNET AND THE HOUSING SECTOR

Objective:

Undertake a review of current housing and community planning applications on the Internet and explore the potential implications of various scenarios on the future of the Internet for the community planning sector.

CMHC Project Officer:

B. Sanscartier

Division:

Social and Economic Policy and Research
Centre for Future Studies in Housing and Living Environments

Contractor:

Syllable Internet Expressions Inc.
174 King Edward Avenue
Ottawa, Ontario
K1N 7L5

CIDN:

1619 0200001

1996 TRI-COUNTRY CONFERENCE

Objective:

Assist in bringing housing experts and practitioners

together to exchange information and engage in discussions and workshops on key housing issues common to Canada, the Kingdom and the United States.

CMHC Project Officer:

J. Angus

Division:

Social and Economic Policy and Research

Contractor:

Canadian Housing & Renewal Association
251 Laurier Avenue West
Suite 304
Ottawa, Ontario
K1P 5J6

CIDN:

1593 0200001

ROLE OF HOUSING IN AN ENABLING SOCIETY

Objective:

Analyze and discuss the various roles housing policy can play in the context of the enabling society model. Propose various ways housing policies can be used to promote the philosophy of the enabling society while elaborating on CMHC's role in this regard.

CMHC Project Officer:

E. Nera

Division:

Social and Economic Policy and Research

Contractor:

Ekos Research Associates
275 Sparks Street
Suite 801
Ottawa, Ontario
K1R 7X9

CIDN:

1006 0100001

AUTOMATED PERMITTING SYSTEM: CASE STUDY = SYSTÈME AUTOMATISÉ DE PERMIS : ÉTUDE DE CAS.

Affordability and Choice Today (A.C.T.) Streamlined Approval Process Project / City of Fredericton, Fredericton, New Brunswick. Prepared by Energy Pathways Inc. Prepared for the Federation of Canadian Municipalities, Canadian Home Builders' Association, Canadian Housing and Renewal Association and Canada Mortgage and Housing Corporation. Ottawa: The Associations: The Federation: The Corporation, 1995.

With funding from an A.C.T. grant, Fredericton commissioned a study in 1992 to identify suitable options for an automated permitting system. The City had installed a Geographic Information System (GIS), and it was a requirement of the project that the automated permitting system would be able to link with the GIS. The City also had initiated a review of its zoning by-law. In particular, the City wished to broaden the range of residential zoning options to facilitate affordable housing. With an automated permitting system linked to the City's GIS, Fredericton would have a coordinated zoning and property development approval system and database.

The study included an evaluation of the Planning and Development Department's procedures, its regulatory environment and responsibilities, and its resources. The project consultant, DMR Group Inc., identified opportunities for improvement, determined hardware and software requirements, and evaluated six software programs available in the marketplace.

In the final project report, DMR recommended a software program by Manatron called Building Permits System and advised that the hardware system be based on PC-LAN (Local Area Network) technology to facilitate integration with other systems, specifically the City's GIS.

NOTE: Bilingual/bilingue.

CENTRE DES DEMANDES ET DES RENSEIGNEMENTS SUR L'AMÉNAGEMENT : ÉTUDE DE CAS = ONE-STOP DEVELOPMENT INFORMATION AND APPLICATIONS CENTRE: CASE STUDY.

Abordabilité et choix toujours (A.C.T.) projet de simplification du processus d'approbation / Le service de l'urbanisme et de l'aménagement, Ottawa (Ontario). Préparé par Energy Pathways Inc. Préparé pour La Fédération canadienne des municipalités, L'Association canadienne des constructeurs d'habitations, L'Association canadienne d'habitation et de rénovation urbaine et la Société canadienne d'hypothèques et de logement. Ottawa : Les Associations : La Fédération : La Société, 1995.

En 1989, peu après avoir été réorganisé, le Service de l'urbanisme et de l'aménagement de la Ville d'Ottawa a mis sur pied un Centre des demandes et renseignements sur l'aménagement selon le principe du "guichet unique". Le Centre reçoit en moyenne 3 000 demandes de permis par année, le nombre variant selon le niveau d'activité de la construction. Les clients reçoivent maintenant des renseignements techniques et une aide sur les exigences de présentation, y compris les dispositions du Code du bâtiment et du règlement de zonage ainsi que les autres approbations nécessaires à la demande. Les clients peuvent ainsi prendre conscience dès le début des nombreuses exigences auxquelles leur demande doit se conformer et décider s'ils doivent demander ces approbations simultanément (ce qui réduit encore le délai nécessaire au traitement du permis) ou subséquentement.

HOUSING AFFORDABILITY/LOGEMENT ABORDABLE

En 1990, le Service de l'urbanisme et de l'aménagement de la Ville d'Ottawa a reçu une subvention A.C.T. pour qu'il puisse partager avec les autres municipalités les avantages du Centre des demandes et renseignements sur l'aménagement et de son guichet unique.

Le projet a favorisé une meilleure collaboration entre la Ville d'Ottawa et les constructeurs de même qu'au sein du Service. En outre, il a contribué à réduire le temps et les efforts nécessaires pour obtenir un permis de construire, ce qui améliore l'abordabilité des logements. Par plusieurs mesures, notamment le programme de formation et de perfectionnement du personnel sur l'excellence et le service à la clientèle, le projet a permis d'améliorer les normes de service au public, ce qui réduit substantiellement le nombre de plaintes reçues à propos des délais des permis de construire.

NOTE : Bilingue/bilingual.

CHANGEMENTS À LA RÉGLEMENTATION TOUCHANT LES MAISONS POUR ACCÉDANTS : ÉTUDE DE CAS = REGULATORY CHANGES FOR ENTRY-LEVEL HOUSING: CASE STUDY.

Abordabilité et choix toujours (A.C.T.) projet de simplification du processus d'approbation / Service de la planification et du développement, Municipalité de Fort Saskatchewan, Fort Saskatchewan (Alberta). Préparé par Energy Pathways Inc. Préparé pour La Fédération canadienne des municipalités, L'Association canadienne des constructeurs d'habitations, L'Association canadienne d'habitation et de rénovation urbaine et La Société canadienne d'hypothèques et de logement. Ottawa : Les Associations : La Fédération : La Société, 1995.

Une vague de prospérité a valu à l'Alberta de connaître une croissance appréciable à la fin des années 1970. Pour garder mainmise sur l'aménagement du territoire, le gouvernement de cette province a adopté à cette fin, en 1977, une loi obligeant les municipalités à se doter d'un règlement de zonage. Imitant à cet égard beaucoup d'autres collectivités de la région d'Edmonton, la Municipalité de Fort Saskatchewan a résolument adopté un règlement restrictif devant permettre de contenir l'aménagement foncier.

Constructeurs et promoteurs immobiliers plaidèrent la nécessité de modifier le règlement de zonage limitatif de Fort Saskatchewan de façon à permettre la construction de logements abordables de qualité pour le marché bas de gamme. Il s'imposait, par ailleurs, de modifier l'entente de développement type de la Municipalité et de rationaliser le processus d'approbation afin de favoriser le développement et de réduire les coûts.

À l'automne de 1992, la Municipalité a confié le soin d'étudier ce dossier à une équipe de projet composée de trois dirigeants municipaux et de représentants de la Société Genstar Development. Les discussions avec l'industrie du logement étant déjà chose faite, il ne restait plus à la Municipalité qu'à passer résolument à la préparation du projet de modification du règlement et à consulter les constructeurs et les promoteurs immobiliers au sujet de la formulation des détails. La préparation du document a amené la Municipalité à examiner le règlement de zonage de municipalités déterminées de la région d'Edmonton et de la province. Le règlement modificatif, adopté et mis en vigueur à la mi-décembre de 1992, autorisait l'aménagement de petits terrains d'une largeur minimum de 12,2 m (13,5 m pour un terrain d'angle).

HOUSING AFFORDABILITY/LOGEMENT ABORDABLE

La modification du règlement de zonage autorisant l'aménagement de terrains étroits a donné lieu, en 1993, à l'aménagement d'un lotissement de petits terrains. Non seulement a-t-on pu réduire les coûts d'aménagement, mais cette mesure, ainsi que les modifications apportées à l'entente de développement type, ont eu également pour effet de faire profiter le consommateur de l'épargne ainsi réalisée. Le projet a atteint l'objectif que s'était fixé la Municipalité d'étendre sa gamme d'options en matière de logement tout en répondant aux besoins des accédants à la propriété.

NOTE: Bilingual/bilingual.

THE CONVERTIBLE HOUSE: A FLEXIBLE ALTERNATIVE: CASE STUDY = LE LOGEMENT POLYVALENT : UNE SOLUTION DE RECHANGE SOUPLE : ÉTUDE DE CAS.

Affordability and Choice Today (A.C.T.) Demonstration Project / Dovernel Construction Ltd., Richmond, British Columbia. Prepared by Energy Pathways Inc. Prepared for the Federation of Canadian Municipalities, Canadian Home Builders' Association, Canadian Housing and Renewal Association, and Canada Mortgage and Housing Corporation. Ottawa: The Associations: The Federation: The Corporation, 1995.

In 1988, the City of Vancouver initiated its Secondary Suite Program to ensure that existing and new suites would meet appropriate standards, and also to control their location in residential zones. The program resulted in amendments to Vancouver's Zoning and Development By-law, and to approval procedures, that would legalize existing income-generating secondary suites, simplify the installation of new suites in existing buildings, and permit the construction of new houses with built-in secondary suites.

As an innovative alternative to installing a secondary suite as a permanent feature, Dovernel Construction Ltd., a local builder, proposed construction of a "Convertible House." Designed to look like a single-family dwelling on the outside, the house can be built with or without a secondary suite in place, and converted to the alternate form as homeowners' income and space requirements change throughout their lives.

The cost of building the Convertible House with the secondary suite in place was approximately \$150,000, about \$10,000 more than it would cost for a similar house without the convertibility features. The project team found, however, that although a convertible house costs more to build than a comparable conventional house, the rental income from the secondary suite lowers considerably the qualifying income required of first-time homebuyers. Depending on variables such as construction costs, land value, income from the rental suite, the amount of downpayment and interest rates, the increase in affordability can make convertible housing a very attractive option.

NOTE: Bilingual/bilingue.

HOUSING AFFORDABILITY/LOGEMENT ABORDABLE

DES TERRAINS EN PRÉVISION DE L'AVENIR : GUIDE SUR LES FIDUCIES FONCIÈRES ET LE LOGEMENT ABORDABLE AU CANADA.

Rédigé par Lynn Hanley et Brian Scott. Élaboré par l'Association canadienne d'habitation et de rénovation urbaine sous le patronage de la Société canadienne d'hypothèques et de logements. Ottawa : SCHL, 1995 (LNH 6824).

NOTE : Disponible par la poste : EDM/SCHL, C.P. 3077, Markham, ON, L3R 6G4,
Tél. : 1-800-463-SCHL **Prix : 3,99\$ + TPS + frais d'expédition.

Une fiducie foncière est une organisation créée dans le but précis de détenir un terrain au bénéfice de la communauté. Le terrain est la propriété d'une organisation (en général sans but lucratif) qui a la responsabilité à long terme de protéger une partie de l'intérêt public. Ce manuel est destiné à tous ceux qui désirent mettre sur pied leur propre fiducie foncière communautaire. Il explique le but et les objectifs de ce type de fiducie, décrit les divers modèles qui ont été utilisés, examine les diverses questions qui se posent au groupe qui veut créer une fiducie foncière et fournit de l'information utile pour lancer le projet.

NOTE: Also available in English under the title: *Land for Our Future: A Guide to Land Trusts and Affordable Housing in Canada.* (NHA 6823)

LES «HEARTH HOMES» : PETITES MAISONS POUR LES COLLECTIVITÉS RURALES : ÉTUDE DE CAS = HEARTH HOMES: SMALL HOMES FOR RURAL COMMUNITIES: CASE STUDY.

Abordabilité et choix toujours (A.C.T.) projet d'étude de cas / Interchurch Housing Society, Kentville (Nouvelle-Écosse). Préparé par Energy Pathways Inc. Préparé pour la Fédération canadienne des municipalités, L'Association canadienne des constructeurs d'habitations, L'Association canadienne d'habitation et de rénovation urbaine et La Société canadienne d'hypothèques et de logement. Ottawa : Les Associations : La Fédération : La Société, 1995.

Dans le Kings County (Nouvelle-Écosse), comme dans les autres collectivités rurales canadiennes, de nombreuses personnes habitent des logements inadéquats et insalubres. Pour améliorer les conditions de logement, l'Interchurch Housing Society (IHS), organisme communautaire sans but lucratif, a commencé à fournir des prêts à faible intérêt à des propriétaires-occupants ayant de faibles revenus pour leur permettre d'effectuer des réparations et des améliorations. Mais cette approche s'est révélée rapidement inadéquate et, en 1983, l'IHS a établi le Hearth Homes Program pour répondre aux besoins en matière de logement des ruraux pauvres dans le Kings County. L'habitation «Hearth Home» est un petit bungalow de deux chambres, d'une superficie de 53 m² (572 pi²), qui comporte un poêle à bois central dans l'aire de la cuisine et de la salle de séjour.

Deux logements pilotes ont été achevés (une en 1983 et l'autre en 1984) grâce au financement hypothécaire fourni par l'IHS. Les coûts de la construction des logements ont été de 25 000 \$ et 27 000 \$ respectivement. Puis l'IHS a présenté, à la SCHL, une demande de garanties d'hypothèque pour 20 logements supplémentaires. La demande a été rejetée parce que la conception proposée des petites maisons ne répondait pas aux normes de construction résidentielle de la SCHL. Le projet a été en fin de compte soutenu par le ministère du Logement de la Nouvelle-Écosse par l'entremise de la Nova Scotia Housing Development Corporation. En 1990, 80 logements avaient été bâtis.

HOUSING AFFORDABILITY/LOGEMENT ABORDABLE

Le Hearth Homes Program montre que les besoins en matière de logement ne sont pas uniformes partout au Canada, et que les normes relatives aux programmes subventionnés par le gouvernement fédéral devraient tenir compte des circonstances et des exigences locales. Vu le succès remporté par le Hearth Homes Program pour ce qui est de répondre aux besoins de logement des ruraux pauvres dans Kings County, il semble nécessaire de réexaminer les exigences réglementaires et hypothécaires des programmes de logement subventionnés par les gouvernements.

NOTE : Bilingue/bilingual

HEARTH HOMES: SMALL HOMES FOR RURAL COMMUNITIES: CASE STUDY = LES «HEARTH HOMES» : PETITES MAISONS POUR LES COLLECTIVITÉS RURALES : ÉTUDE DE CAS.

Affordability and Choice Today (A.C.T.) Case Study Project / Interchurch Housing Society, Kentville, Nova Scotia. Prepared by Energy Pathways Inc. Prepared for the Federation of Canadian Municipalities, Canadian Home Builders' Association, Canadian Housing and Renewal Association and Canada Mortgage and Housing Corporation. Ottawa: The Associations: The Federation: The Corporation, 1995.

Many people in Kings County, Nova Scotia, as in other rural Canadian communities, live in inadequate and substandard housing. To upgrade housing conditions, the Interchurch Housing Society (IHS), a non-profit, community organization, began providing low-interest loans to low-income homeowners for repairs and improvements. This approach soon proved inadequate, however, and in 1983, the IHS developed the Hearth Homes Program to address the housing needs of the rural poor in Kings County. The "Hearth Home" is a small, two-bedroom, 53 m² (572 ft²) bungalow, which features a central woodstove in the kitchen/living area.

Two pilot units were completed (one in 1983 and another in 1984) with the IHS's own mortgage financing. The unit construction cost was \$25,000 and \$27,000 respectively. The IHS then applied to Canada Mortgage and Housing Corporation (CMHC) for mortgage guarantees for 20 additional units. The request was denied because the proposed small-house design did not meet CMHC's residential standards. The project was eventually supported by the Nova Scotia Department of Housing through the Nova Scotia Housing Development Corporation. In 1990, 80 units had been constructed.

The Hearth Homes Program illustrates that housing needs are not uniform across Canada. The success of the Hearth Homes Program in meeting the housing needs of the rural poor in Kings County may point to a need to re-examine the regulatory and mortgage requirements of government-funded housing programs.

NOTE: Bilingue/bilingual

HOUSING AFFORDABILITY/LOGEMENT ABORDABLE

HOUSING OURSELVES AFFORDABLY: A GUIDE TO AFFORDABLE HOUSING THROUGH COLLECTIVE SELF-HELP.

Prepared by Jim Duke and Sue MacLeod. Prepared for the Canadian Housing and Renewal Association under the sponsorship of Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995. (NHA 6825)

NOTE: Available from: EDM/CMHC, P.O. Box 3077, Markham, ON, L3R 6G4,
Tel.: 1-800-668-CMHC **Price: \$9.99 plus GST and handling charges.

Many Canadian households are finding it difficult to obtain the kind of housing they need at a price they can afford. Self-help housing, also known as "sweat-equity housing," is a possible solution, particularly when it involves a group of people pooling their ideas, their skills and enthusiasm, and their commitment to realize their dreams. Self-help housing is a broad category: it can be single- or multi-unit housing, can involve community sponsors, as well as future occupants, and can be developed by tenants, homeowners, or members of a co-op. It can even combine residential space with space for other uses.

This manual concerns itself with any self-help or renovation that develops a project containing a number of housing units. In particular, it explores the potential for this approach in urban settings. The manual describes the process step by step: basic concept, feasibility, planning, development, construction, and, finally, moving in. It also provides a list of housing organizations -- the local offices of Canada Mortgage and Housing Corporation, provincial and territorial housing agencies, and non-governmental organizations which may be able to provide additional information, help and guidance.

NOTE: Aussi disponible en français sous le titre : *Se loger à bon compte : guide sur le logement abordable grâce à l'autoconstruction collective* (LNH 6826).

INNOVATIVE ROOMING HOUSES: CASE STUDY = MAISONS DE CHAMBRES NOVATRICES : ÉTUDE DE CAS.

Affordability and Choice Today (A.C.T.) Demonstration Project / Foyer des Cent Abris Non-Profit Organization, Montreal, Quebec. Prepared by Energy Pathways Inc. Prepared for the Federation of Canadian Municipalities, Canadian Home Builders' Association, Canadian Housing and Renewal Association and Canada Mortgage and Housing Corporation. Ottawa: The Associations: The Federation: The Corporation, 1995.

The Foyer des Cent Abris Non-Profit Organization, in cooperation with the Habitations communautaires Centre-Sud Technical Resource Group, the Housing Section of the City of Montreal's Service de l'habitation et du développement urbain and the Société d'habitation du Québec, undertook a demonstration project of two rooming houses containing a total of 24 studio apartments. This project involved the development of innovative architectural ideas aimed at creating an environment that would meet the needs of low-income single persons.

Because of their dimension (35 m²) and innovative design, the studio apartments in both buildings fell between the definitions for rooming house units and for apartments included in the City of Montreal's zoning regulations. According to municipal regulations, a unit equipped with a bathroom and kitchen is defined as an apartment rather than a room. The regulations also stipulate that an apartment have an area of at least 55 m² and that an apartment building provide at least one parking space for every 230 m² of floor area.

HOUSING AFFORDABILITY/LOGEMENT ABORDABLE

Therefore, to encourage the development of housing that meets the needs of the target group, the City revised its zoning by-law to reduce the requirements for unit area and parking spaces. This A.C.T. project shows that it is indeed possible to build, at a reasonable cost, rooming houses that provide low-income persons with a decent quality of life within their community.

NOTE: Bilingual/bilingue.

LAND FOR OUR FUTURE: A GUIDE TO LAND TRUSTS AND AFFORDABLE HOUSING IN CANADA.

Prepared by Lynn Hanley and Brian Scott. Prepared for the Canadian Housing and Renewal Association under the sponsorship of Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995. (NHA 6823)

NOTE: Available from: EDM/CMHC, P.O. Box 3077, Markham, ON, L3R 6G4,
Tel.: 1-800-668-CMHC. **Price: \$3.99 plus GST and handling charges.

Land trusts are organizations created specifically to hold land for the benefit of the community. The land is owned by an organization (usually not-for-profit) that has a long-term responsibility to protect some public interest. This manual is designed for use by those interested in establishing their own community land trust. The manual explains the purpose and objectives of community land trusts, outlines the various models that have been used, reviews the various issues that a group must address in developing their own land trust, and provides information to assist a group in getting started.

NOTE: Aussi disponible en français sous le titre : *Des Terrains en prévision de l'avenir : guide sur les fiducies foncières et le logement abordable au Canada.*

LE LOGEMENT POLYVALENT : UNE SOLUTION DE RECHANGE SOUPLE : ÉTUDE DE CAS = THE CONVERTIBLE HOUSE: A FLEXIBLE ALTERNATIVE: CASE STUDY.

Abordabilité et choix toujours (A.C.T.) projet de démonstration / Dovertel Construction Ltd., Richmond (Colombie-Britannique). Préparé par Energy Pathways Inc. Préparé pour La Fédération canadienne des municipalités, L'Association canadienne des constructeurs d'habitations, L'Association canadienne d'habitation et de rénovation urbaine et La Société canadienne d'hypothèques et de logement. Ottawa : Les Associations : La Fédération : La Société, 1995.

En 1988, la Ville de Vancouver a entrepris la mise en oeuvre du Secondary Suite Program afin de s'assurer que les appartements existants et neufs répondaient aux normes appropriées, et pour contrôler leur emplacement dans les secteurs résidentiels. Le programme a donné lieu à des modifications du règlement relatif au zonage et à l'aménagement à Vancouver, ainsi qu'à des procédures d'approbation qui légaliseraient les appartements accessoires existants de rapport, simplifieraient l'installation de nouveaux appartements dans les immeubles existants et permettraient la construction de nouvelles maisons dotées d'appartements accessoires intégrés.

HOUSING AFFORDABILITY/LOGEMENT ABORDABLE

À titre de solution de rechange innovatrice à l'installation d'appartements accessoires de façon permanente, la société Dovel Construction Ltd., entreprise de construction locale, a proposé la construction d'une «habitation polyvalente». Conçu pour avoir l'aspect d'une maison individuelle à l'extérieur, le logement peut être construit avec ou sans appartement accessoire. Il peut être transformé au fur et à mesure que le revenu du propriétaire-occupant et ses besoins en espace changent, tout au long de sa vie.

Le coût de la construction du logement polyvalent doté de l'appartement accessoire était d'environ 150 000 \$, soit presque 10 000 \$ de plus que celui de la construction d'une maison semblable sans les caractéristiques polyvalentes. Cependant, l'équipe du projet a constaté que malgré le coût de construction supérieur du logement convertible par rapport à la maison classique comparable, le revenu locatif de l'appartement accessoire réduisait considérablement le revenu admissible requis des accédants à la propriété. Compte tenu de variables telles que le coût de la construction, la valeur du terrain, le revenu de l'appartement locatif, le montant de la mise de fonds et les taux d'intérêt, l'augmentation de l'abordabilité peut faire du logement polyvalent une option très attrayante.

NOTE : Bilingue/bilingual.

MAISONS DE CHAMBRES NOVATRICES : ÉTUDE DE CAS = INNOVATIVE ROOMING HOUSES: CASE STUDY.

Abordabilité et choix toujours (A.C.T.) projet de démonstration / OSBL Foyer des Cent Abris, Montréal (Québec). Préparé par Energy Pathways Inc. Préparé pour la Fédération canadienne des municipalités, l'Association canadienne des constructeurs d'habitations, l'Association canadienne d'habitation et de rénovation urbaine et la Société canadienne d'hypothèques et de logement. Ottawa : Les Associations : La Fédération : La Société, 1995.

L'organisme sans but lucratif (OSBL) Foyer des Cent Abris, en collaboration avec le Groupe de ressources techniques Habitations communautaires Centre-Sud, le Module de l'habitation du Service de l'habitation et du développement urbain de la Ville de Montréal et la Société d'habitation du Québec, a présenté un projet de démonstration qui avait pour but de construire deux maisons de chambres, comprenant 24 studios. Ce projet visait le développement d'idées architecturales novatrices en vue de créer un environnement adapté aux besoins de la clientèle visée.

En raison de leur superficie (35 m²) et de leur conception novatrice, les studios dans les deux immeubles ne correspondaient ni à la définition de chambre dans une maison de chambres ni à celle d'appartement selon les règlements de zonage de la Ville de Montréal. En effet, selon les règlements municipaux, un logement doté d'une salle de bains et d'une cuisine constitue un appartement plutôt qu'une chambre. La réglementation exige en outre qu'un appartement ait une superficie minimale de 55 m², et que chaque immeuble offre un espace de stationnement pour chaque 230 m² de surface utile qu'il contient. Pour favoriser le développement d'habitations adaptées aux besoins du groupe cible, la Ville a donc assoupli ses règlements de zonage en ce qui concerne la superficie des logements et les espaces de stationnement.

Ce projet A.C.T. démontre qu'il est possible de construire, à un coût raisonnable, des maisons de chambres qui donnent aux personnes seules à faible revenu une qualité de vie convenable au sein de leur communauté.

NOTE : Bilingue/bilingual.

HOUSING AFFORDABILITY/LOGEMENT ABORDABLE

ONE-STOP DEVELOPMENT INFORMATION AND APPLICATIONS CENTRE: CASE STUDY = CENTRE DES DEMANDES ET DES RENSEIGNEMENTS SUR L'AMÉNAGEMENT : ÉTUDE DE CAS.

Affordability and Choice Today (A.C.T.) Streamlined Approval Process Project / Department of Planning and Development, City of Ottawa, Ottawa, Ontario. Prepared by Energy Pathways Inc. Prepared for the Federation of Canadian Municipalities, Canadian Home Builders' Association, Canadian Housing and Renewal Association and Canada Mortgage and Housing Corporation. Ottawa: The Associations: The Federation: The Corporation, 1995.

In 1989, the City of Ottawa's recently reorganized Department of Planning and Development established a "one-stop" Development Information and Applications Centre. The Centre receives an average of 3,000 permit applications each year, depending on the level of building activity. Clients now receive technical information and assistance on submission requirements, including building code and zoning by-law requirements and other necessary approvals relevant to the application. This allows clients to be aware of the many requirements pertaining to their applications from the outset, and to determine the appropriateness of applying for approvals concurrently (thereby further reducing the time required to process the permit) or consecutively.

In 1990, the City of Ottawa's Department of Planning and Development was awarded an A.C.T. grant so that the benefits of the one-stop Development Information and Applications Centre could be shared with other municipalities.

The project fostered renewed cooperation between the City of Ottawa and the building community, as well as within the Department. Furthermore, it has contributed to a reduction in the time and effort required to obtain a building permit, thereby improving housing affordability. Through several initiatives, including the staff training and development program on excellence and customer service, the project has improved the standard of service to the public, thereby substantially reducing the number of complaints received about building permit delays.

NOTE : Bilingual/bilingue.

REGULATORY CHANGES FOR ENTRY-LEVEL HOUSING: CASE STUDY = CHANGEMENTS À LA RÉGLEMENTATION TOUCHANT LES MAISONS POUR ACCÉDANTS : ÉTUDE DE CAS.

Affordability and Choice Today (A.C.T.) Streamlined Approval Process Project Planning and Development Department, City of Fort Saskatchewan, Fort Saskatchewan, Alberta. Prepared by Energy Pathways Inc. Prepared for the Federation of Canadian Municipalities, Canadian Home Builders' Association, Canadian Housing and Renewal Association, and Canada Mortgage and Housing Corporation. Ottawa: The Associations: The Federation: The Corporation, 1995.

Alberta experienced a great deal of growth beginning in the late 1970s with its development boom. To control land development, the Alberta government adopted a planning act in 1977 that required municipalities to have a land use by-law. The City of Fort Saskatchewan, like many other communities in the Edmonton area, adopted a by-law that was purposely restrictive in order to limit land development.

HOUSING AFFORDABILITY/LOGEMENT ABORDABLE

Builders and developers pointed out that Fort Saskatchewan's restrictive land use by-law needed to be changed in order to permit development of affordable, quality homes for the low-end market. In addition, the City's standardized development agreement needed to be modified and the approval process streamlined to facilitate development and reduce costs.

The City formed a project team with three municipal officials and Genstar Development Co. in the fall of 1992 to deal with these issues. Given the discussions that had already taken place with the housing industry, the City was able to proceed directly with preparing a draft by-law amendment and consulting with builders and developers for input on specifics. When preparing the draft, the City also reviewed land use by-laws of selected municipalities in the Edmonton region and elsewhere in the province. The amending by-law was approved and in effect by mid-December 1992, permitting small lots to a minimum of 12.2 m in width (13.5 m for corner lots).

Changes to the land use by-law permitting narrow lots cleared the way for a small-lot subdivision development in 1993. This, coupled with changes to the standardized development agreement, has reduced development costs, and the resulting savings have been passed on to consumers. The project has fulfilled the City's goal to increase its range of housing options, with emphasis on meeting the needs of entry-level homebuyers.

NOTE: Bilingual/bilingue.

SE LOGER À BON COMPTE : GUIDE SUR LE LOGEMENT ABORDABLE GRÂCE À L'AUTOCONSTRUCTION COLLECTIVE.

Préparé par Jim Duke et Sue Macleod. Préparé pour l'Association canadienne d'habitation et de rénovation urbaine sous le patronage de la Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1995. (LNH 6826)

NOTE : Disponible par la poste : EDM/SCHL, C.P. 3077, Markham, ON, L3R 6G4
Tél. : 1-800-463-SCHL. **Prix : 9,99 \$ + TPS + frais d'expédition.

De nombreux ménages canadiens éprouvent de la difficulté à trouver le type de logement dont ils ont besoin à un prix abordable. L'autoconstruction, connue également sous l'expression «mise de fonds en travail», est une solution possible au problème du logement, en particulier lorsqu'elle est retenue par un groupe de personnes qui mettent en commun leurs idées, leurs compétences et leur enthousiasme, et s'engagent à réaliser leur rêve. L'autoconstruction regroupe de nombreux types de logement : il peut s'agir d'unités unifamiliales ou d'immeubles multi-logements, on peut faire appel à des parrains dans la communauté, ainsi qu'aux futurs occupants, et l'entreprise peut être prise en charge par des locataires, des propriétaires ou les membres d'une coopérative. On peut même se trouver devant une combinaison d'aires résidentielles et de locaux réservés à d'autres usages.

Ce manuel couvre tous les types d'autoconstruction ou de rénovation qui visent à créer un ensemble comprenant un certain nombre de logements. Il examine, en particulier, le potentiel de cette approche en milieu urbain. Le manuel décrit le processus étape par étape : concept de base, faisabilité, planification, développement, construction et, finalement, emménagement. Il présente également une liste d'organismes, dont les bureaux locaux de la Société canadienne d'hypothèques et de logement, les organismes provinciaux et territoriaux de logement et les organismes non gouvernementaux qui peuvent fournir de l'information supplémentaire, de l'aide et des conseils.

NOTE: Also available in English under the title: *Housing Ourselves Affordably: A Guide to Affordable Housing Through Collective Self-Help* (NHA 6825).

HOUSING AFFORDABILITY/LOGEMENT ABORDABLE

SYSTÈME AUTOMATISÉ DE PERMIS : ÉTUDE DE CAS = AUTOMATED PERMITTING SYSTEM: CASE STUDY.

Abordabilité et choix toujours (A.C.T.) projet relatif au processus rationalisé d'approbation / Ville de Fredericton, Fredericton (Nouveau-Brunswick). Préparé par Energy Pathways Inc. Préparé pour La Fédération canadienne des municipalités, L'Association canadienne des constructeurs d'habitations, L'Association canadienne d'habitation et de rénovation urbaine et La Société canadienne d'hypothèques et de logement. Ottawa : Les Associations : La Fédération : La Société, 1995.

Grâce à une subvention A.C.T., Fredericton a commandé en 1992 une étude visant à circonscrire des options convenables en matière de système automatisé d'attribution des permis. La ville mettait en place un système d'information géographique (SIG) et le fait qu'on puisse relier le système automatisé d'attribution des permis au SIG constituait l'une des exigences du projet. La ville avait également entrepris un examen de ses règlements de zonage. De façon plus particulière, la ville désirait élargir le champ des options en matière de zonage résidentiel afin de favoriser la construction de logements abordables. Un système automatisé d'attribution des permis lié au SIG de la ville permettrait à celle-ci de posséder un système coordonné d'approbation et une base de données en matière de zonage et de développement immobilier.

L'étude comportait une évaluation du service d'urbanisme, de son milieu réglementaire et de ses ressources. L'expert-conseil du projet, le Groupe DMR Inc., a décrit certaines possibilités d'amélioration, défini les exigences en matière d'équipement et de logiciels, et procédé à l'évaluation de six logiciels disponibles sur le marché.

Dans le rapport sur le projet d'exécution, DMR recommandait un logiciel appelé Building Permits System, produit par Manatron, et conseillait que l'équipement informatique se base sur la technologie du PC-LAN (Local Area Network) pour faciliter l'intégration à d'autres systèmes, notamment au SIG de la ville.

NOTE : Bilingue/bilingual

Ongoing Projects/Projets en cours

CONVERSION OF NON-RESIDENTIAL SPACE TO AFFORDABLE HOUSING

Objective:

To develop user friendly building assessment tools that assist developers to determine the feasibility of conducting cost-effective conversions of non-residential space with minimal cash outlays.

CMHC Project Officer:

D. D'Amour

Division:

Social and Economic Policy and Research

Contractor:

Gibbons Hampton Architects
Limited
Woodgate Building
66 Kenmount Road
Suite 306
St. John's, Newfoundland
A1B 3V6

CIDN:

1599 0200001

HOUSING AFFORDABILITY/LOGEMENT ABORDABLE

Ongoing Projects/Projets en cours

THE CUMULATIVE EFFECT OF LEVIES, FEES, AND TAXES AND TRANSACTION COSTS ON HOUSING AFFORDABILITY

Objective:

Produce an information report, designed to raise awareness about the cumulative effect of levies, development charges, fees, taxes and transaction costs on housing prices and affordability.

CMHC Project Officer:

D. Scherlowski

Division:

Social and Economic Policy and Research

Contractor:

Greg Lampert Economic Consultants
51 Maybourne Avenue
Scarborough, Ontario
M1L 2W1

CIDN:

1671 0200001

EVALUATION OF AFFORDABILITY AND CHOICE (A.C.T.) PROGRAM

Objective:

Review the analysis plan and questionnaires drafted by CMHC and recommend improvement if needed; pretest the draft questionnaire and recommend improvement if needed.

CMHC Project Officer:

G. Murray

Division:

Program Evaluation Division

Contractor:

ABT Associates of Canada
112 Kent Street, Suite 2010A
Place de Ville, Tower "B"
Ottawa, Ontario
K1P 5P2

CIDN:

1630 0500001

A GUIDE TO IMPROVING HOUSING AFFORDABILITY

Objective:

To carry out the research and development work under the study title "A Guide to Improving Housing Affordability".

CMHC Project Officer:

F. Grammenos

Division:

Social and Economic Policy and Research

Contractor:

McGill University Office of Technology
3550 University Street
Montreal, Québec
H3A 2A7

CIDN:

0889 0200002

AN IMPROVED MEASURE OF AFFORDABILITY FOR ESTIMATING HOUSING NEEDS

Objective:

Examine the relevance of the fixed 30% shelter cost-to-income ratio for measuring housing affordability in light of the level of actual shelter expenditures compared to incomes and second, examine the potential for an alternative variable shelter

cost-to-income measure of affordability which would be more sensitive to differing households.

CMHC Project Officer:

J. Engeland

Division:

Social and Economic Policy and Research

Contractor:

Clayton Research Associates Limited
1580 Kingston Road
Scarborough, Ontario
M1N 1S2

CIDN:

1568 0200001

MARKET ANALYSIS HOUSING AFFORDABILITY SOFTWARE PROJECT

Objective:

To produce a software program that will assist homebuyers and/or the real estate and housing industry in understanding affordability and the mortgage options available to consumers in a friendly, comprehensive and well-documented manner.

CMHC Project Officer:

D. Dall-Leblanc

Division:

Market Analysis Centre

Contractor:

AIM Technical Services
512-130 Albert Street
Ottawa, Ontario
K1P 5G4

CIDN:

1536 1000001

HOUSING AFFORDABILITY/LOGEMENT ABORDABLE

Ongoing Projects/Projets en cours

SUMMARY REPORT ON MUNICIPAL REGULATORY MECHANISMS TO FACILITATE THE PRODUCTION OF AFFORDABLE HOUSING

Objective:

To undertake a background paper and presentation that will describe the use of regulatory mechanisms by municipalities to facilitate the production of affordable housing without the use of public funds.

CMHC Project Officer:

D. Scherlowski

Division:

Social and Economic Policy and Research

Contractor:

Richard Drdla Associates
415 Wellesley Street East
Toronto, Ontario
M4X 1H5

CIDN:

1670 0200001

SYNTHESIS AND COMMUNICATION ON ACT PROGRAM

Objective:

To carry out the survey of provincial regulatory reforms which will identify, by province, what regulatory reforms have been undertaken, that can impact housing affordability and choice, both prior to and during the ACT program.

CMHC Project Officer:

B. Gray

Division:

Social and Economic Policy and Research

Contractor:

University of Mount Allison
Rural and Small Towns
Programme
Saskville, New Brunswick
E0A 3C0

CIDN:

1571 0200001
1571 0201001

HOUSING AND IMMIGRATION/ LOGEMENT ET IMMIGRATION

Ongoing Projects/Projets en cours

ÉTUDE SUR LES CHOIX RÉSIDENTIELS DES IMMIGRANTS DANS LA RÉGION MÉTROPOLITAINE DE MONTRÉAL (1991)

Objet :

Mettre à jour les tableaux et graphiques de l'étude "Les immigrants propriétaires et le portrait multi-culturel de la région métropolitaine de Montréal à l'aube de l'an 2000

Agent de projet pour la SCHL :

K.A. Lam

Division :

SCHL- région du Québec

Contractant :

Mme Francine Bernéche
5884 rue St-André
Montréal (Québec)
H2S 2K4

NIC :

1700 0200001

HOUSING DESIGN ARCHITECTURE RESIDENTIELLE

Completed Reports/Rapports terminés

LA MAISON ESPACE VIVANT : POLYVALENTE ET DYNAMIQUE.

Publication fondée sur une étude du Programme de subventions de recherche préparée par Sevag Pogharian. Ottawa : Société canadienne d'hypothèques et de logement, 1995. (LNH 6846)

NOTE : Disponible par la poste : EDM/SCHL, C.P. 3077, Markham, ON, L3R 6G4,
Tél. : 1-800-463-SCHL. **Prix : 5,99\$ + TPS + frais d'expédition.

Nouvelle venue sur le marché des maisons adaptables, la Maison espace vivant permet aux accédants à la propriété d'acheter leur toute première maison, une maison modeste, sans renoncer à la beauté ou à la qualité. Cette publication présente la Maison espace vivant aux consommateurs, aux constructeurs et aux administrateurs municipaux et explique pourquoi elle est bien positionnée sur le marché des années 1990. Elle présente les plans et les élévations de trois variantes de la maison et trace l'évolution de chacune, de la phase de construction initiale à l'évolution maximale de la surface habitable. Chaque transformation est accompagnée d'une estimation des coûts et d'une description des besoins du ménage qui le poussent à procéder à des modifications.

NOTE: Also available in English under the title: *Sprout: The Versatile, Dynamic House*.
(NHA 6845)

SPROUT: THE VERSATILE, DYNAMIC HOUSE.

Based on an External Research study carried out by Sevag Pogharian. Ottawa: Canada Mortgage and Housing Corporation, 1995. (NHA 6845).

NOTE: Available from: EDM/CMHC, P.O. Box 3077, Markham, ON, L3R 6G4,
Tel.: 1-800-668-CMHC. **Price: \$5.99 plus GST and handling charges.

The Sprout House is a new entry in the adaptable housing market. It allows first-time buyers to purchase a modest starter home without compromising their expectations for attractive, high-quality shelter. This publication introduces the Sprout House to consumers, home builders and municipal administrators and explains why the Sprout House is well positioned for the market of the 1990s. It presents the plans for three variations of the house and traces the evolution of each variation from the initial period of construction to its point of maximum habitable area. Each conversion is accompanied by cost estimates and a description of the household needs that precipitate the modifications.

NOTE: Aussi disponible en français sous le titre : *La Maison espace vivant : polyvalente et dynamique*. (LNH 6846)

HABITATIONS NOUVELLES EN MILIEU ANCIEN

Objet :

La recherche porte sur les problèmes de design que posent l'implantation et l'intégration de nouvelles habitations dans les milieux résidentiels canadiens de facture plus ou moins homogène ou dans leurs zones limitrophes. Par extension, elle s'intéresse à toute opération de construction nouvelle en milieu ancien, qu'il s'agisse de recyclages, de rénovations ou d'agrandissements.

Agent de projet pour la SCHL :

M. Desbiens

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

Pierre-Richard Bisson
Université de Montréal
Case Postale 6128
Succursale Centre-ville
Montréal (Québec)
H3C 3J7

NIC :

1450 0200001
1030 St-Alexandre

PASSIVE SOLAR HOUSE DESIGNS FOR CANADA

Objective:

To identify relevant literature
and design tools, analyze and
interpret data in order to update
the existing CMHC publication
on passive solar house designs.

CMHC Project Officer:

F. Grammenos

Division:

Technical Policy and Research
Division

Contractor:

Leslie Jones & Associates Ltd.
319 Catherine Street
Ottawa, Ontario
K1R 5T4

CIDN:

1241 0200001

HOUSING EXPORT OPPORTUNITIES/ DÉBOUCHÉS EXTÉRIEURS POUR LE SECTEUR DE L'HABITATION

Completed Reports/Rapports terminés

APERÇU DES DÉBOUCHÉS EXTÉRIEURS POUR LE SECTEUR CANADIEN DE L'HABITATION.

Préparé par The Bayswater Consulting Group, Inc., membre d'une équipe menée par Scanada Consultants Limited de concert avec Silverman Consulting Services Limited et Tuffboard Industries Limited. Préparé pour la Division des relations internationales, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1996. (LNH 6848)

NOTE : Disponible par la poste : EDM/SCHL, C.P. 3077, Markham, ON, L3R 6G4,
Tél. : 1-800-463-SCHL. **Prix : 24,99 \$ + TPS + frais d'expédition.

Au cours des dernières années, la Société canadienne d'hypothèques et de logement (SCHL) a mené une vaste consultation auprès des industriels canadiens afin de déterminer ce qu'il faut pour réussir à percer les marchés internationaux. L'une des réponses les plus fréquentes a été qu'il fallait des renseignements de meilleure qualité et en plus grand nombre sur les débouchés extérieurs dans le domaine de l'habitation. Ce document de référence est une source pratique de renseignements destinés à aider les entreprises canadiennes à repérer des débouchés extérieurs éventuels. Il est facile à consulter et il vous permet de trouver petit à petit une série logique d'informations portant à la fois sur les types de marchés auxquels une entreprise donnée convient le mieux et sur la nature des débouchés qui sont offerts. Il met l'accent sur deux questions principales : quels marchés faut-il viser et quelles sont les exigences de ces marchés?

Rien ne peut remplacer les recherches menées par les entreprises elles-mêmes afin de trouver des débouchés précis compte tenu de leurs points forts et de leurs avantages particuliers. Bien que ce guide puisse aider les entreprises à réduire l'éventail des débouchés, le choix définitif revient aux entreprises. Il peut, cependant, indiquer aux entreprises les types de produits, de techniques et de services susceptibles d'être les mieux appropriés, mais il ne peut garantir le succès de quelque orientation adoptée. Si une entreprise a ses propres relations dans d'autres pays, les capacités linguistiques et culturelles nécessaires, ainsi qu'une gamme de produits, de techniques et de services à offrir à des prix concurrentiels, elle est susceptible d'en connaître davantage au sujet des marchés cibles que ce que le présent guide peut lui apprendre. Toutefois, celui-ci peut s'avérer un outil précieux pour combler certaines lacunes et même aider des entreprises à envisager des possibilités qui peuvent leur avoir échappé.

NOTE: Also available in English under the title: *Overview of Housing Export Opportunities for Canadians*. (NHA 6847).

HOUSING EXPORT OPPORTUNITIES/ DÉBOUCHÉS EXTÉRIEURS POUR LE SECTEUR DE L'HABITATION

OVERVIEW OF HOUSING EXPORT OPPORTUNITIES FOR CANADIANS.

Prepared by the Bayswater Consulting Group, Inc. as part of a team led by Scanada Consultants Limited with Silverman Consulting Services Limited and Tuffboard Industries Limited. Prepared for International Relations Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996. (NHA 6847)

NOTE: Available from EDM/CMHC, P.O. Box 3077, Markham, ON, L3R 6G4,
Tel.: 1-800-668-CMHC. **Price: \$24.99 plus GST and handling charges.

Over the past several years, CMHC has consulted extensively with Canadian industry about what is required to succeed in international markets. One very frequent request is for more and better information on housing export opportunities. This reference document provides a practical source of information that can help Canadian companies identify potential housing markets around the world. It is designed to be user-friendly, moving step-by-step through a decision-making sequence that considers both the types of markets for which a business is most suited and the nature of the opportunities that await. It focuses on two major questions: which markets should be considered and what do these markets require?

There is no substitute for a company's own investigations of specific market opportunities in relation to its own particular strengths and advantages. While this report can help to narrow the range of possibilities, it cannot make the final choice. It can, however, signal which types of products, technologies and services may be most appropriate. If a company has its own contacts in other countries, the necessary language and cultural capabilities, unique products, technologies or services to sell, and competitive prices, it may well know more about its target markets than this volume can offer. However, this document may still prove valuable in filling some gaps, and perhaps, in helping companies think of other opportunities not yet considered.

NOTE: Aussi disponible en français sous le titre : *Aperçu des débouchés extérieurs pour le secteur canadien de l'habitation (LNH 6848)*.

HOUSING EXPORT OPPORTUNITIES/ DÉBOUCHÉS EXTÉRIEURS POUR LE SECTEUR DE L'HABITATION

Ongoing Projects/Projets en cours

CANADIAN HOUSING FEASIBILITY STUDY FOR GERMANY

Objective:

Carry out a feasibility study and develop a proposal for a Canadian presentation to the German Government for a Canadian housing certificate program to more easily allow the export to Germany of Canadian housing systems, products and services.

CMHC Project Officer:

C. McCallum

Division:

International Relations Division

Contractor:

Otto & Erskine Architects Inc.
30 Rosemount Avenue
Suite 200
Ottawa, Ontario
K1Y 1P4

CIDN:

1712 0900001

CANADIAN/JAPANESE CONSTRUCTION COST ANALYSIS OF A TYPICAL 2X4 FRAMED HOUSE PLAN

Objective:

Develop a costing spreadsheet tool for use on all soft and hard costs forming part of the delivered turn key project including at minimum, design; permits; and approvals; materials; etc.

CMHC Project Officer:

P. Burr

Division:

International Relations Division

Contractor:

Export Council of Canadian
Architecture
901-1575 Beach Avenue
Vancouver, British Columbia
V6G 1Y5

CIDN:

1596 0900001

COMPETITION FOR GLOBAL HOUSING MARKETS

Objective:

To examine the housing export capabilities of Canada's principal competitors in international housing markets as well as the strategic approaches that these countries use to do business internationally.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

Scanada Consultants Limited
446 Reynolds Street
Oakville, Ontario
L6J 3M4

CIDN:

1369 0900001

DEVELOPMENT OF A HOUSING MARKET STUDY IN CHINA

Objective:

To develop a housing market study that can be utilized by the Canadian housing industry to pursue the commercial opportunities in China and provide housing exporters with

guidelines and a strategy for operating in China.

CMHC Project Officer:

A. Lucciola

Division:

International Relations Division

Contractor:

The Delta Partners
32 Burrows Road
Ottawa, Ontario
K1J 6E6

CIDN:

1433 0900005
1433 0900003

EXPORTABLE HOUSE BUILDING AND REHABILITATION TECHNOLOGIES

Objective:

To undertake an analysis and develop a presentation of exportable Canadian housing technologies.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor;

Scanada Consultants Limited
446 Reynolds Street
Oakville, Ontario
L6J 3M4

CIDN:

1294 0900001

HOUSING EXPORT OPPORTUNITIES/ DÉBOUCHÉS EXTÉRIEURS POUR LE SECTEUR DE L'HABITATION

GUIDE TO BECOMING HOUSING EXPORT READY

Objective:

To help potential housing exporters to self-assess their degree of export readiness; identify impediments to their being, or becoming export ready; and identify resources that will assist in overcoming impediments to becoming export ready.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

Perwit International
505 Westminister Avenue
Ottawa, Ontario
K2A 2T9

CIDN:

1693 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN CENTRAL AND EASTERN EUROPE

Objectives:

To identify, measure, analyse and evaluate housing export opportunities for Canadians in Central and Eastern Europe.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

The Canadian Urban Institute
30 St. Patrick Street
6th Floor
Toronto, Ontario
M5T 3A3

CIDN:

1580 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN LATIN AMERICA

Objectives:

To prepare a study to give depth to the sparse information and analysis that currently is available about Latin American housing markets and market opportunities as well as Canada's capacity to address these opportunities.

CMHC Project Officer:

L. Marti-Aguilar

Division:

International Relations Division

Contractor:

Holmen Enterprises Limited
8449-118 Street
Edmonton, Alberta
T6G 1T2

CIDN:

1563 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN MAINLAND ASIA AND THE PACIFIC RIM

Objective:

To carry out research on mainland Asia (excluding China) which will identify, measure, analyse and evaluate housing export opportunities for Canadians.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

Hickling Corporation
350 Sparks Street
6th Floor
Ottawa, Ontario
K1R 7S8

CIDN:

1565 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN THE MIDDLE EAST

Objective:

Carry out a study to identify, measure, analyse and evaluate housing export opportunities for Canadians in the Middle East.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

Nordicity Group Ltd.
280 Albert Street
10th Floor
Ottawa, Ontario
K1P 5G8

CIDN:

1608 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN WESTERN EUROPE

Objective:

To identify, measure, analyse and evaluate housing export opportunities for Canadians in Western Europe.

CMHC Project Officer:

C. McCallum

Division:

International Relations Division

Contractor:

Trema Gestion Conseil Inc.
10160 avenue St-Charles
Montreal, Quebec
H2C 2L4

CIDN:

1564 0900001

HOUSING EXPORT OPPORTUNITIES/ DÉBOUCHÉS EXTÉRIEURS POUR LE SECTEUR DE L'HABITATION

HOUSING EXPORT OPPORTUNITIES IN THE U.S. FOR CANADA'S HOUSING INDUSTRY

Objective:

To identify, measure, analyse and evaluate housing export opportunities for Canadians in the United States.

CMHC Project Officer:

P. Spurr

Division:

International Relations Division

Contractor:

Centre for International Business Studies

École des hautes études commerciales

5255 Decelles Avenue

Montreal, Quebec

H3T 1V6

CIDN:

1504 0901001

HOUSING EXPORTER GUIDES 3-5 (NEW EXPORTER SERIES)

Objective:

Develop three guides for Canada's housing exporters.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

Perwit International

505 Westminster Avenue

Ottawa, Ontario

K2A 2T9

CIDN:

1710 0900002

OPPORTUNITIES FOR CANADA'S HOUSING INDUSTRY IN KOBE, JAPAN: AN ASSESSMENT OF EXPORT-READINESS AND VIABLE STRATEGIES

Objective:

To produce an assessment of housing opportunities in Kobe and Canada's capacity to respond; produce a companion listing of Canadian export-ready firms; produce a think-piece proposing strategies designed to position the Canadian housing industry to respond to opportunities in Kobe.

CMHC Project Officer:

P. Burr

Division:

International Relations Division

Contractor:

Scanada Consultants Limited

446 Reynolds Street

Oakville, Ontario

L6J 3M4

CIDN:

1489 0900001

SPONSORSHIP PROGRAM FOR THE MEXICAN KNOWLEDGE BASE

Objective:

To develop a program to inform and promote Mexico as a key destination for Canadian business exports and market development initiatives.

CMHC Project Officer:

L. Marti-Aguilar

Division:

International Relations Division

Contractor:

Foreign Affairs and
International Trade Department

125 Sussex Drive

Lester Pearson Building

Ottawa, Ontario

K1A 0G2

CIDN:

1659 0900001

HOUSING FORECASTING AND DEMAND/ PRÉVISION ET DEMANDE DE LOGEMENTS

Ongoing Projects/Projets en cours

TRENDS - HOUSING AND URBAN COMMUNITIES IN THE FUTURE

Objective:

Prepare a 20-25 page background paper and deliver a presentation based on the paper at a one-day CMHC-chaired symposium on Housing Affordability in Ottawa

CMHC Project Officer:

D. Scherlowski

Division:

Social and Economic Policy and Research

Contractor:

Angus Reid Group
Suite 1400
1 Nicolas Street
Ottawa, Ontario
K1N 7B7

CIDN:

1490 0100001

HOUSING SAFETY/ SECURITÉ À DOMICILE

Ongoing Projects/Projets en cours

HOUSING RELATED SAFETY AND SECURITY STANDARDS

Objective:

To identify the work being done by key players both nationally and internationally who have been involved in the development of housing-related safety and security standards based on 'crime prevention through environmental design' (CPTED) principles and to produce a synopsis of this work done over the last 10 years. The final report will include a literature review and the results of a survey of CPTED practitioners.

CMHC Project Officer:

J. Taggart

Division:

Social and Economic Policy and Research

Contractor:

B.C. Coalition for Safer Communities & Secure Design
C/O The People's Law School
150-900 Howe Street
Vancouver, British Columbia
V2Z 2M4

CIDN:

1299 0100002

HOUSING SAFETY/SECURITÉ À DOMICILE

Ongoing Projects/Projets en cours

SAFETY AUDIT KIT AND DEMONSTRATION RESEARCH PROJECT

Objective:

To develop and process for delivery the safety audit kit demonstration research project.

CMHC Project Officer:

B. Baxter

Division:

Social and Economic Policy and Research

Contractor:

University of Mount Allison
Rural and Small Town
Programme
Sackville, New Brunswick
E0A 3C0

CIDN:

1545 0100001

SÉCURITÉ URBAINE, PRÉVENTION DE LA CRIMINALITÉ ET INTERVENTIONS EN HABITATION DANS LES QUARTIERS MONTRÉALAIS

Objet :

La présente a pour but de vous confirmer l'engagement de la SCHL à financer un projet de la SHDM intitulé Sécurité urbaine, prévention de la criminalité et interventions en habitation dans les quartiers montréalais.

Agent de projet pour la SCHL :

B. Baxter

Division :

Politiques et recherche sociales
et économiques

Contractant :

Société d'habitation du Québec
Direction générale de la
planification et de la recherche
1054 rue Conroy
Québec (Québec)
G1R 5E7

NIC :

1411 0100001

INFRASTRUCTURE

Ongoing Projects/Projets en cours

FINANCING OF INFRASTRUCTURE AND LOCAL SERVICES

Objective:

To carry out a study on the state of research in financing of infrastructure and local services, and on the information needs of organizations involved in the area.

CMHC Project Officer:

D. Myette

Division:

Social and Economic Policy and Research

Contractor:

Enid Slack Consulting Inc.
214 King Street West
Suite 318
Toronto, Ontario
M5H 3S6

CIDN:

1566 0200001

MANUFACTURED HOUSING/ HABITATIONS USINÉES

Ongoing Projects/Projets en cours

AN OPTIMUM VALUE ENGINEERING (OVE) STUDY OF THE CANADIAN MANUFACTURED HOUSING INDUSTRY

Objective:

Prepare an industry analysis and a series of engineering reports compiled into a final report which will present detailed and tangible findings and recommendations to achieve optimum value from the manufacturing process.

CMHC Project Officer:

J. Robar

Division:

Technical Policy and Research Division

Contractor:

Canadian Manufactured Housing Institute
150 Laurier Avenue West
Suite 200
Ottawa, Ontario
K1P 5J4

CIDN:

1597 0200001

MOISTURE PROBLEMS/HUMIDITÉ

Ongoing Projects/Projets en cours

EVALUATE WATER REPELLENTS FOR ABOVE GRADE MASONRY

Objective:

Evaluate the performance of various water repellents on a comparative basis and develop practical methods to evaluate their effectiveness.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research Division

Contractor:

Armande Patenaude
Patenaude-Chiovitti Inc.
1320 montée Ste-Julie
Varenes, (Québec)
J3X 1P8

CIDN:

1696 0300002

ICE DAMMING DATA ANALYSIS

Objective:

Analyse all the data collected in the previous project "Ice Damming Field Research" and provide a report on the findings.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research Division

Contractor:

Scanada Consultants Limited
446 Reynolds Street
Oakville, Ontario
L6J 3M4

CIDN:

1662 0300004

STRAW BALE MOISTURE SENSOR STUDY

Objective:

To develop and test inexpensive moisture sensors that could be used by owners of straw bale houses for monitoring of moisture conditions inside straw walls.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research Division

Contractor:

Instruscience Ltd.
65 Bentley
#15
Ottawa, Ontario
K2E 8B4

CIDN:

1720 0800001

**MORTGAGE AND HOUSING FINANCE/
HYPOTHÈQUES ET LOGEMENT -- FINANCES**

Ongoing Projects/Projets en cours

**FEASIBILITY STUDY ON
METHODOLOGY FOR
MEASURING
DISCRIMINATION IN
RESIDENTIAL MORTGAGE
LENDING**

Objective:

To identify alternative approaches to measuring discrimination in residential mortgage lending, and determine the feasibility of these different methods. Prepare a report providing recommendations and a detailed action plan for implementation.

CMHC Project Officer:

S. Olm

Division:

Strategic Planning

Contractor:

Prairie Research Associates Inc.
300-326 Broadway
Winnipeg, Manitoba
R3C 0S5

CIDN:

1352 0100001

**THE OPTIMAL MORTGAGE
TERM SELECTION**

Objective:

To conduct a study that will identify the conditions under which mortgagors can reasonably choose a mortgage term that minimizes interest costs.

CMHC Project Officer:

M. Pellerin

Division:

Market Analysis Centre

Contractor:

Mary McDonough Research
Associates
151 Yonge Street
Suite 1210
P.O. Box 7
Toronto, Ontario
M5C 2W7

CIDN:

1525 1000001

Ongoing Projects/Projets en cours

FEASIBILITY STUDY TO OVERCOME BARRIERS FOR ABORIGINAL HOME OWNERSHIP

Objective:

Research and identify Aboriginal population statistics; average income levels; and the percentages in rental and ownership housing; etc.

CMHC Project Officer:

N. Koeck

Division:

Delivery and FP Relations
Division

Contractor:

Gignul Non-Profit Housing
Corporation
Suite 712
151 Slater Street
Ottawa, Ontario
K1P 5H3

CIDN:

1613 1500001

FOLLOW-UP TO ABORIGINAL HOUSING NEEDS STUDY

Objective:

To develop detailed housing condition information for specific Aboriginal groups.

CMHC Project Officer:

J. Engeland

Division:

Social and Economic Policy and
Research

Contractor:

Ark Research Associates
165 Hinton Avenue North
Ottawa, Ontario
K1Y 0Z9

CIDN:

1598 0200001

PLANNING OF NATIVE NORTHERN COMMUNITIES

Objective:

An evaluation of the level of success of existing planning and housing practice for Native communities in the western portion of the Northwest Territories.

CMHC Project Officer:

D. Jamieson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Gino A. Pin
Sub Post Office no. 1
3502 Raccine Road
Yellowknife, Northwest
Territories
X1A 2S9

CIDN:

1462 0200001

FROSTLINE: NORTHERN AND REMOTE TECHNOLOGY IN HOUSING: A PUBLICATION OF THE NORTH COMMITTEE.

Ottawa: Canada Mortgage and Housing Corporation, Technical Policy and Research Division, Winter 1996.

In the first of a series of articles on renewable energy sources, Frostline presents a profile of Doug Craig, the consultant behind the Haeckel Hill wind turbine just north of Whitehorse. The publication also deals with other housing topics of relevance for northern Canada. They include: a new program to document advances in renewable energy technologies; sewage disposal alternatives for remote communities; a small native community without utility services; housing activity in the Northwest Territories; the Winter Cities Forum '96; and window designs for the eastern Arctic.

NOTE: Aussi disponible en français sous le titre : *Septentrion : recherche en technologie de l'habitation dans le Nord : publication du comité du Nord.*

SEPTENTRION : RECHERCHE EN TECHNOLOGIE DE L'HABITATION DANS LE NORD : PUBLICATION DU COMITÉ DU NORD.

Ottawa : Société canadienne d'hypothèques et de logement, Division des politiques et de la recherche en matière technique, Hiver 1996.

Dans le premier d'une série d'articles consacrés aux sources d'énergie renouvelable, Septentrion esquisse le profil de Doug Craig, consultant responsable de l'aménagement de l'éolienne du Mont Haeckel au nord de Whitehorse. La publication traite également d'autres sujets d'habitation et de leur à-propos pour le Nord. Ils comprennent : un nouveau programme qui vise à documenter les progrès technologiques réalisés dans le secteur des énergies renouvelables; des techniques d'évacuation des eaux usées dans les collectivités éloignées; une petite collectivité autochtone sans des services d'utilité publics; un profil du secteur de l'habitation dans les Territoires du Nord-Ouest; le Forum 96 des villes d'hiver; et les fenêtres conçues pour l'Arctique est.

NOTE: Also available in English under the title: *Frostline: Northern Research into Housing Technology: A Publication of the North Committee.*

Ongoing Projects/Projets en cours

RENATURALISATION DES SURFACES DÉCAPÉES AU VOISINAGE DES HABITATIONS DANS LE VILLAGE NORDIQUE DE KUUJJUAQ

Objet :

De sélectionner les espèces végétales les plus performantes en fonction des conditions locales; de déterminer les modes les plus efficaces de production des plantes; et d'identifier les techniques les plus appropriées de mise en terre des plantes.

Agent de projet pour la SCHL :

M. Desbiens

Division :

Politiques et recherche sociales
et économiques
Programme de subventions
de recherche

Contractant :

Gilles Houle
Centre d'études nordiques
Université Laval
Cité universitaire
Québec (Québec)
G1K 7P4

NIC :

1457 0200001

RESEARCH AND DEMONSTRATION PROJECTS ON TWO HOUSES IN DAWSON CITY

Objective:

Carry out a number of research and demonstration projects on two houses in the area of foundations, heating, ventilation, and building envelope problems.

CMHC Project Officer:

R. Duncan

Division:

Technical Policy and Research
Division

Contractor:

Yukon Housing Corporation
410 A Jarvis Street
Whitehorse, Yukon
Y1A 2H5

CIDN:

1676 0300001

THE COMMUNITY ORIENTED MODEL OF THE LIVED ENVIRONMENT: REVISION OF DATA TABLES AND ANNOTATED BIBLIOGRAPHY

Objective:

Update and revise measures and data sources for indicators and specific measures for the Community Oriented Model of the Lived Environment (COMLE) and update the annotated quality of life research.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre for Future Studies
in Housing and Living
Environments

Contractor:

Judy Bates
Department of Geography
York University
4700 Keele Street
North York , Ontario
M3J 1P3

CIDN:

1680 0200001

RENTAL HOUSING/LOGEMENT LOCATIF

Ongoing Projects/Projets en cours

EFFECTS OF THE TAX SYSTEM ON RENTAL HOUSING: THE CASE IN HALIFAX

Objective:

Analyse the effects of taxes on the cost of capital (COC) and the related concepts of marginal effective tax rates (METR) and gross rent flows for rental housing investments in Halifax, Nova Scotia under different inflation conditions.

CMHC Project Officer:

B. Sanscartier

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Mr. Alex S. MacNevin
144 Glenforest Drive
Halifax, Nova Scotia
B3M 1J1

CIDN:

1633 0200001

THE RESIDUALIZATION OF RENTAL TENURE: IMPLICATIONS FOR HOUSING POLICY

Objective:

Examine how both the rental housing stock and the profile of rental tenants has changed over the past 2 decades from 1971-91; explore how the changing tenant profile is perceived by private rental landlords; and determine if this change is significant in

influencing the decisions of private rental landlords to disinvest in rental housing. The emphasis is not on the feasibility of new rental construction but on transactions in the existing rental stock.

CMHC Project Officer:

B. Sanscartier

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Stephen P. Pomeroy
Focus Consulting
40 Java Street
Ottawa, Ontario
K1Y 3L3

CIDN:

1463 0200001

RESIDENTIAL DEVELOPMENT/AMÉNAGEMENT RÉSIDENTIEL

Ongoing Projects/Projets en cours

REVENUE AND NET COSTS ASSOCIATED WITH CONVENTIONAL AND ALTERNATIVE DEVELOPMENT PATTERNS

Objective:

Compare life-cycle revenues and net costs associated with two patterns of development: a conventional suburban development pattern and a mixed-use, more compact development planned according to the principles of "New Urbanisms".

CMHC Project Officer:

D. D'Amour

Division:

Social and Economic Policy and Research

Contractor:

Hemson Consulting Ltd.
30 St. Patrick Street
Suite 1000
Toronto, Ontario
M5T 3A3

CIDN:

1552 0200001

RESIDENTIAL REHABILITATION/ RÉNOVATION DE LOGEMENTS

Ongoing Projects/Projets en cours

CONSTRUCTION D'UN INDICE SYNTHÉTIQUE POUR LES DÉPENSES DE RÉNOVATION RÉSIDENTIELLE AU QUÉBEC

Objet :

L'objectif de ce projet est de construire un indice synthétique précurseur des dépenses de rénovation résidentielle pour le Québec, dont les caractéristiques et les paramètres pourraient être éventuellement transposés aux six régions métropolitaines du Québec.

Agent de projet pour la SCHL :
G. Proulx

Division :

Centre d'analyse de marché

Contractant :

François Raymond
c/o Cirano
2020 rue Université
25ème étage
Montréal (Québec)
H3A 2A5

NIC :

1631 1000001

RENOVATING MULTIPLE HIGH-RISE RESIDENTIAL BUILDING FOR THE INFORMATION HIGHWAY

Objective:

To obtain information to guide building owners and managers, architects and engineers on the options and alternatives to bring high-rise residential buildings up to date for the information highway.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre for Future Studies in Housing and Living Environments

Contractor:

Connors Architects and Planners
1489 Hollis Street
P.o. Box 606
Halifax, Nova Scotia
B3J 2R7

CIDN:

1684 0200001

RENOVATION DEMONSTRATION 1996-HEALTHY HOUSING FACTSHEETS

Objective:

Develop a series of nine Healthy Housing Factsheets

CMHC Project Officer:

T. Marshall

Division:

Technical Policy and Research Division

Contractor:

REIC Ltd.
15010 Yonge Street
Aurora, Ontario
L4G 1M6

CIDN:

1530 0300006

RENOVATOR'S RESOURCE GUIDE: BUILDING SCIENCE AND HOUSE PERFORMANCE

Objective:

Development of the Renovator's Resource Guide: Building Science and House Performance

CMHC Project Officer:

T. Marshall

Division:

Technical Policy and Research Division

Contractor:

Lio and Associates
88 Prince Arthur Avenue
Suite 300
Toronto, Ontario
M5R 1B6

CIDN:

1592 0300001

SEWAGE DISPOSAL/EAUX USÉES

Ongoing Projects/Projets en cours

MONITORING PROCEDURES AND MAINTENANCE MANUAL FOR THE OFF-GRID WATER/WASTEWATER TREATMENT SYSTEMS IN CMHC'S TORONTO HEALTHY HOUSE

Objective:

To establish the standards and procedures for monitoring and operating the innovative off-grid systems in the Toronto Healthy House for water and wastewater treatment.

CMHC Project Officer:

C. Ives

Division:

Technical Policy and Research
Division

Contractor:

Mr. A.R. Townshend
930 Seven Springs Lane
RR #1
Athens, Ontario
K0E 1B0

CIDN:

0779 0209002

SOCIAL HOUSING/LOGEMENT SOCIAL

Ongoing Projects/Projets en cours

ANALYSIS OF THE RELATIVE COST AND EFFECTIVENESS OF SELECTED SOCIAL RENTAL HOUSING PROGRAMS

Objective:

To assess the effectiveness of selected rental housing programs in addressing the problems of affordability, adequate supply, and housing quality. The study will determine how traditional non-profit supply programs and shelter allowances perform, over time under different market conditions.

CMHC Project Officer:

P. Deacon

Division:

Social and Economic Policy and
Research

Contractor:

Canadian Housing and Renewal
Association
251 Laurier Avenue West
Suite 304
Ottawa, Ontario
K1P 5J6

CIDN:

1351 0600001

NATIONAL ENABLEMENT DEMONSTRATION INITIATIVE

Objective:

To undertake the development and coordination of a national enablement demonstration initiative to teach social housing groups the skills and techniques to use in order to develop self-help housing strategies.

CMHC Project Officer:

J. Burr

Division:

Delivery and FP Relations
Division

Contractor:

Canadian Housing and Renewal
Association
251 Laurier Avenue West
Suite 401
Ottawa, Ontario
K1P 5J6

CIDN:

1436 1500001

MEASURING URBAN SUSTAINABILITY: CANADIAN INDICATORS WORKSHOP, JUNE 19-21, 1995: WORKSHOP PROCEEDINGS.

Prepared by David Dilks, LURA Group. Prepared for the State of Environment Directorate, Environment Canada and the Centre for Future Studies in Housing and Living Environments, Canada Mortgage and Housing Corporation. Ottawa: CMHC: Environment Canada, 1996.

In Canada, indicators are increasingly recognized as a key mechanism to encourage and measure progress toward sustainable urban development. When these are used to monitor the environmental, social and economic conditions in cities, the decision-making process is improved, as is policy and program evaluation. However, measuring progress on sustainable development at the urban level requires rethinking our approaches to information gathering and reporting.

Canada Mortgage and Housing Corporation (CMHC) and Environment Canada invited experts from municipalities, the provincial and federal governments and universities to participate in **Measuring Urban Sustainability: Canadian Indicators Workshop**. In this forum, they were able to discuss the successes and shortcomings of their current frameworks and approaches, and to begin charting a course for the future of urban sustainability indicators in Canada. This report shows that progress was made on a number of fronts. Participants worked toward the identification of key characteristics of urban sustainability, determination of effective selection criteria for indicators, and the development of a usable list of common sustainability indicators. In addition, they made recommendations for the further development of urban sustainability indicators.

NOTE: Aussi disponible en français sous le titre : *Mesure de la durabilité urbaine : atelier sur les indicateurs au Canada du 19 au 21 juin 1995 : compte rendu de l'atelier.*

MESURE DE LA DURABILITÉ URBAINE : ATELIER SUR LES INDICATEURS AU CANADA DU 19 AU 21 JUIN 1995 : COMPTE RENDU DE L'ATELIER.

Préparé par David Dilks, LURA Group. Préparé pour La Direction générale de l'état de l'environnement, Environnement Canada et Le Centre d'études prospectives sur l'habitation et le cadre de vie, Société canadienne d'hypothèques et de logement. Ottawa : SCHL : Environnement Canada, 1996.

Au Canada, on reconnaît que les indicateurs constituent un mécanisme clé permettant d'encourager et de mesurer les progrès accomplis à l'égard du développement durable des villes. Lorsqu'ils sont utilisés pour observer les conditions environnementales et socio-économiques des villes, les indicateurs permettent d'améliorer le processus de prise de décision et l'évaluation de l'action et des programmes publics. Néanmoins, pour mesurer les progrès accomplis dans le domaine de la durabilité urbaine, il faut repenser nos méthodes de collecte et de diffusion de l'information.

SUSTAINABLE DEVELOPMENT/ DÉVELOPPEMENT DURABLE

Completed Reports/Rapports terminés

La Société canadienne d'hypothèques et de logement (SCHL) et Environnement Canada ont invité des experts provenant des universités, des municipalités ainsi que des gouvernements fédéral et provinciaux à participer à «**Mesure de la durabilité urbaine : atelier sur les indicateurs au Canada**». Cet atelier leur a fourni l'occasion de discuter des réussites et des échecs des méthodes et des cadres actuels et de commencer à modéliser l'avenir des indicateurs de durabilité urbaine au Canada. Comme en fait foi ce compte rendu, la question a progressé sur plusieurs fronts. Les participants ont travaillé à déterminer les caractéristiques clés de la durabilité urbaine, à établir des critères de sélection efficaces pour les indicateurs et à dresser une liste utilisable d'indicateurs de durabilité communs. En outre, les participants ont formulé des recommandations visant à poursuivre plus avant l'élaboration d'indicateurs de durabilité urbaine.

NOTE: Also available in English under the title: *Measuring Urban Sustainability: Canadian Indicators Workshop, June 19-21, 1995: Workshop Proceedings.*

Ongoing Projects/Projets en cours

COMMUNITY REPORTING AND INDICATORS PROJECT: AN ANALYTICAL TOOL FOR URBAN SUSTAINABILITY -SCOPING EXERCISE

Objective:

Investigate the feasibility of developing an analytical tool-set to assist communities and municipalities in their own assessment of progress toward sustainability.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre for Future Studies in Housing and Living Environments

Contractor:

ESSA Technologies Ltd.
1765 West 8th Avenue
Suite 300
Vancouver, British Columbia
V6J 5C6

CIDN:

1447 0200005

MULTIFAMILY HOUSING FOR COMMUNITY SUSTAINABILITY

Objective:

Develop information to assist municipalities and the development industry to develop land at higher than average densities while maintaining or improving the quality of life.

CMHC Project Officer:

F. Grammenos

Division:

Social and Economic Policy and Research

Contractor:

Quadrangle Architects Limited
380 Wellington Street West
Toronto, Ontario
M5V 1E3

CIDN:

1628 0300001

SUSTAINABLE DEVELOPMENT/ DÉVELOPPEMENT DURABLE

Ongoing Projects/Projets en cours

SUSTAINABLE LANDSCAPE DESIGN FOR RESIDENTIAL DEVELOPMENTS

Objective:

To highlight the link between sustainable development for housing with the condition, composition and use of native vegetation.

CMHC Project Officer:

S. Sandrock

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Karen Vagelatos
Vagelatos Associates Landscape
Architecture Ltd.
207-2211 West 4th Avenue
Vancouver, British Columbia
V6K 4S2

CIDN:

1466 0200001

VISUALIZING SUSTAINABILITY: ANALYZING PREFERENCES FOR SUSTAINABLE COMMUNITY DESIGN

Objective:

The scope of this research is to provide a visual forum for the exploration of sustainable community design on the Internet. The purposes of the forum are to educate the public and to provide for the free and open exchange of ideas.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Professor Richard Perron
University of Winnipeg
Department of Landscape
Architecture
Winnipeg, Manitoba
R3T 2N2

CIDN:

1640 0200001

TELEWORK/TÉLÉTRAVAIL

Ongoing Projects/Projets en cours

BEYOND THE HOME OFFICE: AN EXPLORATORY STUDY OF RESIDENTIALLY-BASED, SHARED TELEWORK SPACES

Objective:

To develop and explore a new concept - a residentially-based shared telework space.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Laura C. Johnson
Associates Inc.
374 Sackville Street
Toronto, Ontario
M4X 1S5

CIDN:

1458 0200001

WATER CONSERVATION/ EAU -- CONSERVATION

Ongoing Projects/Projets en cours

APPLICATION FOR SHOWER WASTE WATER HEAT RECOVERY

Objective:

To test the performance of a heat recovery shower product.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Heat Exchangers NF
Incorporated
26 Georgia Drive
Stephenville, Newfoundland
A2N 2T5

CIDN:

1500 0200001

DEVELOPMENT OF A RESIDENTIAL WATER USE MODEL

Objective:

To carry out the development of a residential water use model.

CMHC Project Officer:

P. Russell

Division:

Technical Policy and Research
Division
Panel on Energy Research and Development

Contractor:

Centre for Water Resources
Studies
Technical University of Nova
Scotia
P.O. Box 1000
1360 Barrington Street
Halifax, Nova Scotia
B3J 2X4

CIDN:

1422 0200002
1422 0800001

WATER RECLAMATION PROJECT

Objective:

To develop a residential water reclamation system and to be in a position to hand over to Conservation Co-operative Homes Inc. a viable reclamation system.

CMHC Project Officer:

P. Russell

Division:

Technical Policy and Research
Division

Contractor:

Conservation Co-operative
Homes Inc.
140 Mann Avenue
Ottawa, Ontario
K1N 1E5

CIDN:

1573 02010003

WATER RECYCLING DEMONSTRATION

Objective:

Demonstrate water recycling at the Conservation Co-op in the Ottawa neighbourhood of Sandy Hill.

CMHC Project Officer:

P. Russell

Division:

Technical Policy and Research
Division

Contractor:

Totten Sims Hubicki Associates
20 Terence Matthews Crescent
Kanata, Ontario
K2M 2C4

CIDN:

1573 0200001

WORK ENVIRONMENT/ ENVIRONNEMENT DU TRAVAIL

Ongoing Projects/Projets en cours

REVUE DES ÉCRITS SUR LES CHANGEMENTS DANS L'ENVIRONNEMENT DU TRAVAIL

Objet :

Effectuer une revue des écrits qui
présentent les changements dans
la nature du travail au cours des
dernières années au Canada.

Agent de projet pour la SCHL :

B. Sanscartier

Division :

Politiques et recherche sociales et
économiques
Centre d'études prospectives sur
l'habitation et le cadre de vie

Contractant :

Université de Montréal
École de relations industrielles
C.P. 6128
Succursale Centre-Ville
Montréal (Québec)
H3C 3J7

NIC :

1681 0200001

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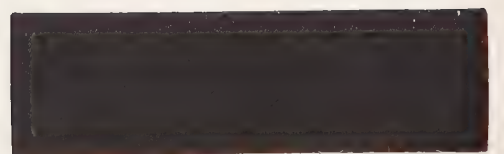
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HOUSING RESEARCH QUARTERLY

RECHERCHE EN LOGEMENT – RAPPORT TRIMESTRIEL

Volume 3
Number 3
1996

Volume 3
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**HOUSING
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**RECHERCHE
EN LOGEMENT-
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INTRODUCTION/INTRODUCTION

Under Part IX of the National Housing Act the Government of Canada provides funds to Canada Mortgage and Housing Corporation to conduct research into the social, economic and technical aspects of housing and related fields.

Housing Research Quarterly is compiled and produced on a quarterly basis by the Canadian Housing Information Centre. This publication provides information and access to research which is undertaken and sponsored by the Corporation.

The publication contains information on completed research reports, new publications, videos and bibliographies, as well as ongoing research projects. An alphabetical title index of items listed is included at the end for quick reference.

"Ongoing Projects" refer to research projects which are currently underway. No reports are yet available. Once the project is completed, and a report is available for distribution, it will be listed in *Housing Research Quarterly* under the "Completed Reports" area with a full bibliographic citation and abstract. The "Ongoing Projects" sections of *Housing Research Quarterly* contain the following information:

Title:
Title of the project, which may not necessarily be the same as the final report.

Objective:
Gives a brief description of the project.

CMHC Project Officer:
Individual within CMHC who is managing the project.

Division:
Division within CMHC which is managing the project.

Contractor:
Individual or firm undertaking the research.

CIDN:
Contract Identification Number.

En vertu de la Partie IX de la loi nationale sur l'habitation le gouvernement du Canada fournit des fonds à la Société canadienne d'hypothèques et de logement pour la recherche sur les aspects sociaux, économiques et techniques du logement et des domaines connexes.

Recherche en logement-rapport trimestriel est produit chaque trimestre par le Centre canadien de documentation sur l'habitation. Il contient des renseignements sur la recherche entreprise et subventionnée par la Société.

La publication présente des renseignements sur les rapports de recherche, les nouvelles publications, les vidéos et les bibliographies, ainsi que sur les projets de recherche en cours. Une liste alphabétique par titres, facile à consulter, se trouve à la fin de l'ouvrage.

Tous les projets non terminés, n'ayant pas encore fait l'objet d'un rapport sont des «projets en cours». Une fois qu'il sera terminé, publié et disponible, le rapport figurera dans la publication *Recherche en logement-rapport trimestriel* sous la rubrique «Rapports terminés» avec références bibliographiques et sommaire. Les sections «Projets en cours» de *Recherche en logement-rapport trimestriel* contiennent les renseignements suivants :

Titre :
Titre du projet, qui n'est pas nécessairement le même que celui du rapport final.

Objet :
Brève description du projet.

Agent de projet pour la SCHL :
Personne au service de la Société qui gère le projet.

Division :
Division de la SCHL chargée de gérer le projet.

Contractant :
Personne ou firme chargée de la recherche.

NIC :
Numéro d'identification du contrat.

ACOUSTICS/ACOUSTIQUE

Ongoing Projects/Projets en cours

ISOLATION ACOUSTIQUE PROCURÉE PAR LES FENÊTRES DE PROJETS RÉSIDENTIELS

Objet :

Déterminer la performance acoustique des fenêtres qui sont le plus couramment utilisées dans l'industrie de la construction.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Michel Morin MJM Conseillers en acoustique inc.
6555, chemin Côte-des-Neiges
Bureau 440
Montréal (Québec)
H3S 2A6

NIC :

1636 0200001

QUALIFICATION DU DEGRÉ DE CONFORT ACOUSTIQUE PROCURÉ PAR LES IMMEUBLES MULTILOGEMENTS

Objet :

L'objectif de la recherche est de doter l'industrie de la construction d'un outil faible d'évaluation du degré de confort acoustique d'un logement. Ceci peut être accompli en regroupant les connaissances acquises lors de projets de recherche précédents sous forme d'objectifs d'isolation sonore et en élaborant un protocole d'évaluation préliminaire.

Agent de projet pour la SCHL :

M. Desbiens

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Michel Morin
MJM Conseillers en Acoustique inc.
6555, chemin Côte-des-Neiges
Bureau 440
Montréal (Québec)
H3S 2A6

NIC :

1461 0200001

ATTICS/GRENIERS

Ongoing Projects/Projets en cours

DEMONSTRATION OF IMPROVED ATTIC VENTILATION AND MOISTURE CONTROL STRATEGIES

Objective:

Test unconventional attic ventilation strategies in both new and existing houses. Use the existing attic computer program to help select which venting strategy will work best.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research
Division

Contractor:

Sheltair Scientific Ltd.
#2-3661 West 4th Avenue
Vancouver, British Columbia
V6R 2P1

CIDN:

1377 0200001

1377 0800001

BUILDING LAW RÉGLEMENTATION DE LA CONSTRUCTION

Ongoing Projects/Projets en cours

COMPUTER CONFERENCING TO IMPROVE TRAINING ON RESIDENTIAL BUILDING CODES AND REGULATIONS

Objective:

To develop an Internet web page through a jurisdiction overriding various municipalities (e.g. Greater Vancouver Regional District) utilizing current hypertext machine language (HTML), and technology that will contain a conferencing module to allow computer interactivity between the key stakeholders and the development

of an expert system database; establish an evolving body of knowledge in the critical residential design, construction and permitting areas (e.g. building envelope and fire safety); and explore the development of other knowledge bases.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

John J. Guenther
Manager Inspections
The City of North Vancouver
141 West 14th Street
North Vancouver, British
Columbia
V7M 1H9

CIDN:

1632 0200001

BUILDING MATERIALS MATÉRIAUX DE CONSTRUCTION

Completed Reports/Rapports terminés

E Z CORNERS METAL ANGLE FRAMING ACCESSORY.

Prepared by Drago Blazevic and Paul Skerry Associates Ltd. Prepared for Social and Economic Policy and Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995. (Housing Technology Incentives Program)

Work was begun in the summer of 1995 to set up a testing protocol which would generate sufficient data to manufacture and market a framing accessory or a series of framing accessories under the trade name E Z Corners. The idea was to eliminate the use of unnecessary framing lumber by substituting a sheet metal angle or other shape which would be versatile, not subject to shrinkage, economical and easy to install. It was decided that the simple "L" shape and the "L" shape in combination with a standard steel stud would be the most useful and most practical shape to develop. A project was selected that was in the wood-frame phase of construction and the E Z Corners system of sheet metal angles was installed. The project was allowed to weather for a complete heating season and was examined, in March 1996, for signs of deformation, screw popping, or any signs associated with shrinkage or drying. None were found.

ADJUST-A-FORM

Objective:

Development of ideas for adjustable, reusable forms. Specifically the project includes the inception to the development of a specific product ready for marketing. The end result is a product that saves builders time and material and therefore project cost.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology
Incentives Program

Contractor:

Raymax Construction Limited
1038 Lesperance Road
Tecumseh, Ontario
N8N 1W8

CIDN:

1501 0200001

BUILDING

ADAPTABILITY: A SURVEY OF SYSTEMS AND COMPONENTS

Objective:

To create a catalogue of building systems and components as well as design principles which could be used to improve the adaptability of buildings.

CMHC Project Officer:

F. Grammenos

Division:

Technical Policy and Research
Division

Contractor:

Young + Wright Architects
Inc.
172 St. George Street
Toronto, Ontario
M5R 2M7

CIDN:

160 50200001

PERFORMANCE OF BOX BEAMS

Objective:

Review the design specifications, production, assembly, and testing/monitoring criteria for box beams, and finalize the design and details of production and testing and monitoring protocol.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology
Incentives Program

Contractor:

Art Woski
4133 Northcliffe Avenue
Montreal, Quebec
H4X 3L2

CIDN:

1176 0200001

PLUMB SEAL

Objective:

To prepare final design work, prototype development, testing and reporting of the plumb seal.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology
Incentives Program

Contractor:

R & S Enviro Products Ltd.
1 Church Street
Unit 10
Keswick, Ontario
L4P 3E9

CIDN:

1348 0200001

PRO TRIM

Objective:

To review the design, installation and testing/monitoring criteria for the system and finalize the design and details of a testing and monitoring protocol. The testing/monitoring will be designed to determine design requirements for optimum installation and removal procedures and the performance characteristics of the system through climatic and structural variations found in the indoor residential environment.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology
Incentives Program

Contractor:

Eroica Industries Limited
Box 1886
Espanola, Ontario
P0P 1C0

CIDN:

1395 0200001

Completed Reports/Rapports terminés

STRUCTURAL INVESTIGATION OF SLENDER PRESTRESSED BRICK WALLS.

Prepared by Edward M. Lacika and Robert G. Drysdale. Prepared for Canada Brick and Social and Economic Policy and Research Division, Housing Technology Incentives Program, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996.

This report contains the results of an investigation of the out-of-plane structural behaviour of slender prestressed brick walls. Eleven simply supported walls with slenderness (h/t) ranging from 30 to 67 ($h = 2.7$ m to 6.0 m) were tested. Prestress in the walls was induced using a 26 mm diameter threaded rod which was unbonded but guided. The 1.2 m wide walls were constructed by an experienced mason using 90x90x290 mm bricks. The construction of the prestressed walls did not require special equipment, and it was possible to use commercially available tools and materials. Multiple tests were conducted on each wall to maximize the amount of information obtained. Material properties of the individual wall components were determined to provide data for use in analyses.

The assessment of the structural behaviour included investigating the interaction between slenderness, axial load, and prestress, as well as determining the influence of repeated loading on the response. The effect of eccentric axial load, applied at 30 mm from the center of the cross-section, was also investigated. For direct comparison, normally reinforced walls were also tested. Axial loads up to 800 kN were applied as the walls were subjected to out-of-plane loading. The precompression in the masonry due to prestress ranged from 0.9 to 2.7 MPa.

The findings indicate that, compared to conventional reinforcement, prestressing greatly improved the behaviour of slender brick walls. At all slenderness levels, the walls supported axial loads greater than those which would typically be found in low-rise construction. As well, the use of prestress was more effective at higher slenderness, and controlled the onset of cracking. At low slenderness, the axial load also behaved as a prestress. Prestressed walls also exhibited a high resistance to repeated loading, which made it possible to perform multiple tests on one wall.

The experimental investigation identified two major difficulties which need to be addressed in future work. The ultimate limit state behaviour may be governed by the prestressing bar bursting out of the wall resulting in a sudden collapse. Moreover, a closer examination of the stress concentrations near the stress distribution plate/beam is required to avoid vertical splitting of the wall.

MONITOR THE PERFORMANCE OF AN IMPROVED WALL

Objective:

Monitor the performance of the test wall located at 312 Cumberland Street in Ottawa so that the performance of the wall will be documented when the head joints are opened up in order to permit natural ventilation in the wall cavity of the test wall. The proposed work will help determine the effectiveness of having both top and bottom ventilation in a wall.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research Division

Contractor:

Keller Engineering Associates Inc.
1390 Prince of Wales Drive
Ottawa, Ontario
K2C 3N6

CIDN:

0411 0305001

PREPARATION OF BEST PRACTICE GUIDE FOR FLASHING DETAILS, MASONRY VENEER/ CONCRETE BLOCK CONSTRUCTION AND WOODFRAME CONSTRUCTION

Objective:

To prepare three guides on building envelope design:
1) a 'best practice' guide for concrete block exterior wall construction; 2) a 'best practice' guide for various exterior wall assemblies with wood frame construction; 3) a 'best practice' guide for the flashing of wood, concrete and steel frame building envelopes. The documents will contain details, specifications, sequence of

construction and information on inspection and commissioning.

CMHC Project Officer:

S. Marshall

Division:

Technical Policy and Research Division

Contractor:

Robert Halsall & Associates/Otto & Bryden Arch.
210 Gladstone Avenue
Ottawa, Ontario
K2P 0Y6

CIDN:

0974 0300001

PROTECTING GYPSUM SHEATHING IN INSULATED STEEL-STUD WALLS

Objective:

Prepare and test wall systems that include combinations of three different warm face treatments and six different cold side materials. The warm face of the wall systems will be treated in one of the following ways: no protection; a vapour permeable but water repellent membrane such as Tyvek or Typar; a vapour barrier such as polyethylene.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Kim Pressnail
University of Toronto
35 St. George Street
Toronto, Ontario
M5S 1A4

CIDN:

1282 0200001

RAIN COMPUTER PROGRAM AND USER MANUAL UPDATE AND TUTORIAL

Objective:

To revise the user manual to provide the designer with direct information on different aspects of pressure-equalized rainscreen wall design (such as compartmentalization, vent area design, flexibility, etc.) In the revised manual, a section will be reserved for information on the limitations of the new RAIN Program.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research Division

Contractor:

Rowan William Davies & Irwin Consulting Engineers
650 Woodlawn Road West
Guelph, Ontario
N1K 1B8

CIDN:

1258 0300003

RAIN CONTROL AND WIND DRIVEN RAIN

Objective:

To produce guidelines for the testing and commissioning of pressure equalized rainscreen walls.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research Division

Contractor:

Quirouette Building Specialists
18 Crispin Private
Vanier, Ontario
K1K 2T8

CIDN:

1123 0304002

CONCRETE/BÉTON

Ongoing Projects/Projets en cours

DURABILITY AND REPAIR OF CONCRETE: A PUBLICATION FOR BUILDING OWNERS AND MANAGERS

Objective:

Completion of an illustrated text for a practical document on the restoration of structural concrete for building owners and managers.

CMHC Project Officer:

C. Soroczan

Division:

Technical Policy and Research
Division

Contractor:

G.G. Litvan
248 Range Road
Ottawa, Ontario
K1N 8J8

CIDN:

1512 0200001

DEVELOPMENT OF A NEW EDITION OF THE STANDARD FOR CONCRETE CONSTRUCTION FOR HOUSING AND SMALL BUILDINGS (CSA A438)

Objective:

To carry out the development of a new edition of the standard for concrete construction for housing and small buildings (CSA A438).

CMHC Project Officer:

J. Robar

Division:

Technical Policy and Research
Division

Contractor:

Canadian Standards
Association
178 Rexdale Boulevard
Toronto, Ontario
M9W 1R3

CIDN:

1259 0200001

CONTAMINATED LANDS TERRAINS CONTAMINÉS

Ongoing Projects/Projets en cours

THE COMPILATION OF HOUSING DATA FOR SITE SPECIFIC RISK ASSESSMENT PROCEDURES

Objective:

Compile housing data to be used for site specific risk assessments and prepare draft of a handbook to be used by site assessors when selecting house characteristics.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research
Division

Contractor:

Figley Consulting Associates
Ltd.
350 Crean Crescent
Saskatoon, Saskatchewan
S7J 3X2

CIDN:

1534 0200001

EVALUATION OF SITE SPECIFIC RISK ASSESSMENTS FOR HOUSES

Objective:

To carry out the evaluation of site specific risk assessments for houses.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research
Division

Contractor:

Golder Associates Ltd.
500-4260 Still Creek Drive
Burnaby, British Columbia
V5C 6C6

CIDN:

1534 0200002

COOPERATIVE AND NON-PROFIT HOUSING LOGEMENT SANS BUT LUCRATIF ET COOPÉRATIVES

Ongoing Projects/Projets en cours

CONSERVATION DE PATRIMOINE IMMOBILIER COOPÉRATIF

Objet :

Décrire la prise en charge par les membres des activités d'entretien dans les coopératives d'habitation au Québec; identifier l'action des organismes d'assistance dans ce domaine; préciser les moyens par lesquels les activités d'entretien et les interventions des différents acteurs peuvent être optimisées.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

André Poulin
Centre de gestion des coopératives
Écoles des hautes études commerciales
640-3333, chemin de la Reine-Marie
Montréal (Québec)
H3V 1A2

NIC :

1281 0200001

INTÉGRATION DES MEMBRES PRATIQUES DE GESTION DES COOPERATIVES D'HABITATION

Objet :

La recherche vise à étudier les processus d'intégration et d'habitation au sein des pratiques de gestion en milieu coopérative d'habitation.

Agent de projet pour la SCHL :

N. Gervais

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Madame Marie J. Bouchard
Université du Québec à Montréal
Case postale 6192
Succursale Centre-ville
Montréal (Québec)
H3C 4R2

NIC :

1451 0200001

TRAINING & NON-PROFIT HOUSING ASSOCIATIONS

Objective:

Contribution to create a self-sustaining program to establish a consistent and coherent approach to education and training for staff and volunteer board members of non-profit housing associations across Canada.

CMHC Project Officer:

B. Lortie

Division:

Direct Portfolio Operations
Division

Contractor:

Canadian Housing and Renewal Association
251 Laurier Avenue West
Suite 401
Ottawa, Ontario
K1P 5J6

CIDN:

1467 1501001
1467 1500001

CRIME PREVENTION/CRIMINALITÉ -- PRÉVENTION

Completed Reports/Rapports terminés

LA THÉORIE ET LA PRATIQUE DE LA PRÉVENTION DU CRIME PAR L'AMÉNAGEMENT DU MILIEU.

Préparé par Steve Schneider et Patti Pearcey, B.C. Coalition for Safer Communities. Préparé pour la Division des politiques et de la recherche en matière socio-économique, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1996.

La prévention de la criminalité dans la collectivité ne saurait ignorer le rôle que joue le milieu physique dans la promotion ou la prévention du crime. Les rapprochements qu'on a tenté d'établir entre le milieu physique, le crime et la prévention du crime ont donné lieu à la production de blocs de connaissances aussi variées et controversées que considérables. Une approche de la prévention de la criminalité, communément désignée sous l'appellation de prévention du crime par l'aménagement du milieu (PCAM), regroupe une bonne partie de ces connaissances. La PCAM préconise qu'un aménagement approprié du milieu, joint à une exploitation efficace du milieu bâti, peut contribuer à réduire l'incidence de la criminalité et la peur du crime et amener les résidents à exercer davantage de responsabilité et un meilleur contrôle à l'égard de leurs maisons et de leur quartier. Le présent rapport veut donner une vue d'ensemble de la théorie et de la pratique de la PCAM et dégager pour la Société canadienne d'hypothèques et de logement des options de lignes de conduite et de programmes à envisager.

Ce rapport livre d'abord du projet une vue d'ensemble qui fait état de ses objectifs, des méthodes de recherche et de la portée ainsi que des limites de cette recherche. Suit une analyse bibliographique, qui commence par un résumé des théories qui posent en principe l'existence d'un rapport entre le milieu physique et le crime. La définition de ce problème précède une analyse de la documentation dont la PCAM a fait l'objet. Cette analyse présente une vue d'ensemble de la théorie de la PCAM et un résumé des nombreux principes et composants de la PCAM. Suit une analyse de la documentation pertinente à la PCAM qui cherche surtout à dégager et à examiner les critiques et les lacunes des études théoriques et empiriques. En guise de conclusion, le rapport dégage certaines leçons à tirer des études effectuées sur la PCAM, et formule des options et des recommandations de lignes de conduite et de programmes à l'intention de la SCHL.

NOTE: Also available in English under the title: *The Theory and Practice of Crime Prevention Through Environmental Design: A Literature Review.*

THE THEORY AND PRACTICE OF CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN: A LITERATURE REVIEW.

Prepared by Steve Schneider and Patti Pearcey, B.C. Coalition for Safer Communities. Prepared for Social and Economic Policy and Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996.

The field of community crime prevention would not be complete if it failed to recognize the role of the physical environment in encouraging or preventing crime. The hypothesized relationship between the physical environment, crime and crime prevention has produced a considerable, diverse, and controversial body of knowledge. A central part of this body of knowledge is a crime prevention approach commonly referred to as Crime Prevention Through Environmental Design (CPTED). The rationale behind CPTED is that the proper design and effective use of the built environment can lead to a reduction in the incidence of crime and fear of crime as well as encourage residents to take greater responsibility and control over their homes and neighbourhood. The objective of this report is to provide an overview of the theory and practice of CPTED with a view to outlining policy and program options for Canada Mortgage and Housing Corporation.

The report first provides an overview of the project background, including objectives, research methods and the scope and limitations of the research. The review of the literature then begins with a summary of the theories which posit a relationship between the physical environment and crime. Following this problem definition, a review of the CPTED literature is undertaken. This review includes an overview of the theory of CPTED and a synopsis of the many principles and components of CPTED. This is followed by an analysis of the CPTED literature with emphasis on identifying and examining both the criticisms of and gaps in the theoretical and empirical literature. This report then concludes by identifying some of the lessons learned from the CPTED literature. Finally, policy and program options and recommendations for CMHC are made.

NOTE : Aussi disponible en français sous le titre : *La Théorie et la pratique de la prévention du crime par l'aménagement du milieu.*

DISABLED/HANDICAPÉS

Completed Reports/Rapports terminés

CRITÈRES DE PERFORMANCE EN ACCESSIBILITÉ UNIVERSELLE.

Préparé par Société d'habitations communautaires Logique Inc. Ottawa : Société canadienne d'hypothèques et de logement, 1994, c.-à-d. 1996. (Programme de subventions de recherche)

L'accessibilité universelle est un concept architectural qui permet à tous les individus, incluant les personnes ayant des limitations fonctionnelles, d'évoluer sans contraintes dans un lieu ou un édifice. Ce projet de recherche a pour but de vérifier la fonctionnalité des critères d'accessibilité universelle utilisés pour la réalisation de trois immeubles d'habitation de type multifamilial et de proposer des améliorations et des pistes de recherche afin de définir les nouveaux critères de performance à utiliser pour de futurs projets d'habitation.

Une enquête auprès de 67 locataires habitant un logement universellement accessible a permis de recueillir des informations sur l'utilisation, la satisfaction et les difficultés rencontrées avec les différents éléments architecturaux de l'immeuble et du logement. Les résultats ont démontré qu'à part quelques exceptions, l'adaptation de logements universellement accessibles n'a pas demandé de travaux de nature architecturale. La grande majorité des adaptations réalisées ont consisté à installer des équipements spécialisés. Comparativement aux travaux d'adaptation requis pour le logement traditionnel, l'adaptation de logements universellement accessibles s'avère nettement avantageuse pour les personnes handicapées et les organismes subventionneurs d'adaptation de domicile.

En conclusion, on peut affirmer que le concept d'accessibilité universelle et ses critères de performance conviennent bien aux besoins d'une population diversifiée, que certains ajustements sont encore nécessaires pour optimiser la réponse aux besoins de cette population et des clientèles qui la composent et qu'ils présentent des avantages importants comparativement aux critères traditionnels de conception. De plus, cette étude démontre également qu'un logement répondant aux besoins d'une personne ayant des limitations fonctionnelles peut répondre également de façon adéquate aux besoins des personnes sans limitations, facteur essentiel pour un promoteur ou un constructeur qui désire obtenir la clientèle des personnes ayant des limitations, sans pour autant perdre sa clientèle régulière.

NOTE: Also available in English under the title: *Universal Accessibility Performance Criteria*.

RAIL ASSISTED BATHROOM TRANSFER DEVICE: FINAL REPORT-PHASE III.

Prepared by Thomas Baleshta, Tetra Society of North America. Ottawa: CMHC, 1995. (Housing Technology Incentives Program)

The Rail Assisted Bathroom Transfer Device developed by the Tetra Society allows disabled users to move between the shower/bathtub and the toilet in a regular sized bathroom, without having to use their wheelchair. The device consists of a seat equipped with rollers mounted on rails. The seat rolls back and forth between the toilet and the shower/tub which reduces the number of transfers necessary in standard-sized bathrooms. This project was undertaken to test the performance of the device.

Using people of different disabilities, ages and sizes, the Rail Assisted Bathroom Transfer Device was tested and evaluated in the G.F. Strong Rehabilitation Centre. The results of the testing were analyzed and modifications were made to the second prototype which was used in home tests. Based on the tests in people's homes the device was found to be best suited to all bathrooms where the bath or soaker tub could be connected via rail to the toilet seat. The modifications to the second prototype improved the device and made it more marketable.

UNIVERSAL ACCESSIBILITY PERFORMANCE CRITERIA.

Prepared by Société d'habitations communautaires Logique Inc. Ottawa: Canada Mortgage and Housing Corporation, 1994, i.e., 1996. (External Research Program)

Universal accessibility is an architectural concept making it possible for all individuals, including people with functional limitations, to function without constraints in a particular place or building. This research project has as its goal to verify the functionality of the universal accessibility criteria used in building three multi-family housing projects and to propose improvements and avenues of research in order to define new performance criteria to be used in future housing projects.

A survey involving 67 tenants living in universally accessible units made it possible to collect information on the use, satisfaction level and difficulties with the various architectural elements in the building and in the individual units. The results showed that, with very few exceptions, the adaptation of universally accessible units did not require any architectural modifications. Most of the adaptations implemented consisted of installing specialized equipment. Compared to traditional units which usually require major interventions in the entrance, the bathroom and kitchen, universally accessible units are clearly more user-friendly for residents with disabilities and more economical for agencies providing grants to finance unit adaptation.

DISABLED/HANDICAPÉS

Completed Reports/Rapports terminés

In conclusion, it can be affirmed that the universal accessibility concept and its performance criteria mesh well with the needs of a diversified population, that certain adjustments are still necessary to optimize the extent to which this concept meets the needs of the population and of the various component client groups and that these criteria offer substantial advantages compared to traditional design criteria. Moreover, this study also shows that a unit meeting the needs of a person with functional limitations may also adequately meet the needs of people without limitations, an essential fact for a housing promoter or builder wishing to reach people with limitations without, at the same time, losing its regular clients.

NOTE : Aussi disponible en français sous le titre : *Critères de performance en accessibilité universelle.*

Ongoing Projects/Projets en cours

CONSUMER EVALUATION OF WHEELCHAIR ACCESSIBLE SOCIAL HOUSING

Objective:

Evaluate how appropriately and adequately the existing design guidelines are addressing the functional requirements of tenants with physical disabilities.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Katherine Taylor
105-1355 West 4th Avenue
Vancouver, British Columbia
V6H 3Y8

HOUSING NEEDS OF PEOPLE WITH DISABILITIES

Objective:

To provide a profile of the housing characteristics and needs of people with disabilities using data from the 1991 Census

and post-censal Health and
Activity Limitations Survey
(HALS).

CMHC Project Officer:

J. Angus

Division:

Social and Economic Policy and
Research

Contractor:

ARK Research Associates
165 Hinton Avenue North
Ottawa, Ontario
K1Y 0Z9

CIDN:

1045 0200003

NARRATIVES ON DEDICATED AND INTEGRATED HOUSING ALTERNATIVES

Objective:

To conduct 3 focus groups (10
in each focus group) with
consumers of mental health
services residing in self
contained units in three housing
settings. These housing settings
have off-site support staff.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Katherine M. Boydell
1001 Queen Street West
Queen Street Mental Health
Centre
Toronto, Ontario
M6J 1H4

CIDN:

1452 0200001

SEAT RAISING DEVICES

Objective:

To develop and test prototypes of a seat raising device that will be easily transportable and which will permit access to standard chairs and other seats without concern for the limited ability of the user to rise from a low seat.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Tetra Development Society
Suite 70
770 Pacific Boulevard South
Vancouver, British Columbia
V6B 5E7

CIDN:

1347 0200001

ELDERLY/PERSONNES ÂGÉES

Completed Reports/Rapports terminés

AGING IN PLACE: STRATEGIES TO MEET THE NEEDS OF SENIOR TENANTS IN NON-PROFIT HOUSING.

Prepared by Christine Kluck Davis. Prepared for Socio-Economic Policy and Research Division, Canada Mortgage and Housing Corporation. Co-sponsored by CMHC and the Nova Scotia Department of Housing and Consumer Affairs. Ottawa: CMHC, 1996.

This study was commissioned to find which building and apartment design features and service delivery mechanisms for aging in place are possible and preferred. The principle aim of the study was to explore options that could enable senior tenants in non-profit housing in Nova Scotia to continue to live independently in their homes for as long as possible.

Information was collected from several sources including 517 senior tenants of non-profit housing; 36 housing managers; and 12 individuals representing a variety of support service providers. A detailed architectural evaluation of six typical seniors' building styles was conducted in order to assess the physical and design aspects of the buildings and individual units.

The results of interviews with tenants showed that between one-third and one-half of the senior tenants living in non-profit housing in Nova Scotia require more support to maintain their independence than they are currently receiving. These are tenants who reported fair or poor health, were limited in their mobility and had difficulties carrying out activities such as bathing, dressing and walking up and down stairs. In addition, as many as one fifth of the tenants may be socially isolated. Ten percent of the tenants surveyed had no one they could call in an emergency. Up to twenty percent had only infrequent visits from friends and family.

The study also revealed that housing managers were concerned about their aging tenants. Collectively, housing managers have found their role changing dramatically over the last ten years. Increasingly, they see themselves as "managing people" rather than buildings.

ELDERLY/PERSONNES ÂGÉES

Completed Reports/Rapports terminés

THE GRAYING OF CANADIAN SUBURBS: PATTERNS, PACE, AND PROSPECTS.

Prepared by Gerald Hodge with the assistance of Laurie McKay and John B. Collins, COPLAN Consultants. Ottawa: Canada Mortgage and Housing Corporation, 1994, i.e. 1996. (External Research Program)

The residence patterns of Canada's elderly, those 65 and older, shifted significantly from 1971-1991. First, was the metropolitanization of the elderly; that is, the more rapid growth in numbers of the elderly who live in metropolitan areas as compared to those living in non-metropolitan areas. Second, was the suburbanization of the elderly within metropolitan areas. 1991 saw, for the first time, more seniors living in the suburbs than in core cities of Census Metropolitan Areas (CMAs). Both of these shifts parallel those that occurred in the United States in the late 1970s.

Metropolitan aging is occurring across the country. In 1991, the concentration of the elderly in nearly half of the 25 CMAs was greater than the national average. CMAs both new and old, and located in all parts of Canada, are experiencing extensive aging. This aging also involves major increases in the numbers and proportions of the very old, those aged 75+, a population group more prone to frailty and in need of support. From 1971-1991, the concentration of the elderly population grew in each suburban zone as well as in core cities. The most dramatic aging was in the Inner Suburbs. The fastest rate of growth of numbers of elderly occurred in the Outer Suburbs. The more distant Suburban Fringe also experienced a progressive aging of its population. The number of the very old (75+) in the suburbs increased more than twice as fast as they did in core cities, thereby underlining the pervasiveness of suburban aging.

A final component study sought to determine how the broad findings regarding the metropolitan elderly applied in actual neighbourhood situations. Two basic tendencies emerged: (1) both the concentrations of the elderly and their living arrangements showed considerable diversity among census tracts, even in the same zone; and (2) there was considerable diversity among tracts within geographic sectors. These census tracts were examined for their complement of supportive features for seniors; e.g., seniors housing, intermediate care, public transit, seniors centres, sidewalks. No tract lacked these features internally or lacked easy access to them. The number of key features did decline the more distant the tract from the core city (excepting for public transit). Also, the more distant the tract the more likely its shopping facilities were not accessible except by car, and it lacked alternative housing to the single family home.

This study highlights the growth of the elderly within previously family-oriented suburbs. Most of the metropolitan elderly already live there, and their numbers will continue to grow, including increases of the very old (75+). There will be a growing number of suburban seniors living alone, becoming more frail, and possibly being over-housed, all with broad implications for planning and housing. The diversity among the neighbourhoods in which seniors live suggests the need for fine-tuned planning and policy initiatives.

RETIREE MIGRANTS TO A SMALL ONTARIO COMMUNITY.

Prepared by Roy T. Bowles, Kenneth B. Beesley and Cynthia Johnston. Ottawa: Canada Mortgage and Housing Corporation, 1994, i.e. 1996. (External Research Program).

This report presents the results of a social survey based on interviews with 172 residents in the Village of Bobcaygeon, Ontario who were 55 years of age or older, retired, and who were migrants to the community. Most of these retiree migrants have come from urban centres and have been in the community only a few years. A major objective of the study was to document the ways in which the retirees who migrate from urban areas to small nonmetropolitan communities relate to these communities.

The research findings show that the retiree migrants who have settled in Bobcaygeon make extensive use of local services, participate in local activities and associations, and have positive feelings about the community. The respondents express high levels of satisfaction with the local community as a place of residence and with the services which it provides, and most feel identified with the community. The most plausible integrating generalization for these patterns is that a large proportion of the respondents in this survey hold a lifestyle - i.e., a set of behaviour patterns and orientations - which is consistent with the resources and opportunities provided by the small nonmetropolitan community of Bobcaygeon and the region in which it is located.

Some cautions should be raised, even though they cannot be directly addressed by the data. Most of the housing constructed for retirees has been relatively expensive, and the growth in the village has been associated with increases in the prices for all real estate. Thus, it is possible that "affordable housing" is more difficult to obtain. While the participation of retirees in community social life sustains the viability of organizations and activities, it is possible that these new members bring different values and objectives which may come into conflict with those held by long term residents, and community conflict may result. In addition, the sample of residents interviewed have, at the present time, a profile characteristic of the "young elderly." If many of these migrants remain in the community as they age, increased patterns of dependency will occur in time. Municipal governments and other responsible bodies will then face the challenge of providing these services.

Ongoing Projects/Projets en cours

ADAPTING MUNICIPAL HOUSING FOR DEMENTIA

Objective:

To contribute to an understanding of what housing providers can do to help residents with dementia age in place.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Myra Schiff Consultants
Limited
213-110 Richmond Street East
Toronto, Ontario
M5C 2P9

CIDN:

1286 0200001

THE COMMUNITY/PRIVACY TRADE-OFF IN SUPPORTIVE HOUSING: A QUALITATIVE STUDY OF CONSUMER PREFERENCES

Objective:

Undertake two qualitative research activities, focus groups and a charrette, which will encourage consumers to express their views and preferences about environments that they consider to be supportive.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Laura C. Johnson Associates
Inc.
374 Sackville Street
Toronto, Ontario
M4X 1S5

CIDN:

1647 0200001

A GUIDE TO PLANNING, DESIGNING, DEVELOPING, MARKETING AND MANAGING HOUSING FOR OLDER CANADIANS

Objective:

To produce an easy to follow and practical guide document that will assist both non-profit groups and the private sector in planning, designing, developing, marketing and managing a wide range of housing choices for older Canadians.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and Research

Contractor:

Baycrest Centre for Geriatric Care
3560 Bathurst Street
North York, Ontario
M6A 2E1

CIDN:

0869 0200001

HOUSING OPTIONS FOR CANADIANS WITH DEMENTIA

Objective:

To produce an easy to follow illustrated and practical guide documenting innovative housing options for people who suffer from dementia, and which is to be titled: "Housing Options for Canadians with Dementia".

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and Research

Contractor:

Communitas Consultants
4550 Beverley Crescent
Vancouver, British Columbia
V6J 4E6

CIDN:

1251 0200001

**MODÈLES
D'INTERVENTION :
SÉCURITÉ EN CAS
D'URGENCE DES
PERSONNES À MOBILITÉ
RÉDUITE ET DES
PERSONNES ÂGÉES EN
PERTE D'AUTONOMIE
VIVANT EN MILIEU
RÉSIDENTIEL RÉGULIER**

Objet :

Cette étude a pour objectif d'intégrer les connaissances et les réflexions actuelles concernant la problématique de la sécurité des personnes âgées et des personnes handicapées vivant en milieu résidentiel régulier, afin de les appliquer au développement de modèles d'intervention pour trois bâtiments multifamiliaux munis d'ascenseur.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Sylvie Quintin
Société d'habitations
communautaires logique inc.
3250, boulevard St-Joseph est
Montréal (Québec)
H1Y 3G2

NIC :

1460 0200001

**NEIGHBOURHOOD GROUP
HOMES: THE PLANNING,
DESIGN AND DEVELOP-
MENT PROCESS**

Objective:

To produce a number of key recommendations, guidelines, and development strategies that will shorten the learning curve for the volunteers, bureaucrats and professionals who usually develop small group homes for seniors.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Ms. Clarke and Dr. Gutman
Gerontology Research Centre
Simon Fraser University
2800 - 515 West Hastings Street
Vancouver, British Columbia
V6B 5K3

CIDN:

1453 0200001

**LA TRANSFORMATION
D'HLM POUR PERSONNES
ÂGÉES EN HLM MIXTES**

Objet :

To examine the impact on residents of the conversion of seniors low rental housing projects into mixed projects designed to include accommodation for families or low income residents under 55 years old.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Francine Dansereau
INRS-urbanisation
3465, rue Durocher
Montréal (Québec)
H2X 2C6

NIC :

1642 0200001

**USER SATISFACTION STUDY
OF HOUSING OPTIONS FOR
OLDER CANADIANS**

Objective:

To carry out user satisfaction studies of some of the newer housing options that are

currently available to older Canadians, and to produce an objective and detailed report based on the results of the research.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and Research

Contractor:

Simon Fraser University
Gerontology Research Centre
2800-515 West Hastings Street
Vancouver, British Columbia
V6B 5K3

CIDN:

1583 0200001

**VIVRE À DOMICILE OU EN
RÉSIDENCE : UN DÉFI POUR
LES AINÉS ET LES
INTERVENANTS**

Objet:

To examine for the Saguenay region in Québec, the circumstances, constraints, limits and difficulties faced by clients and caregiver organizations receiving and providing homecare services.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Danielle Maltais
555, boulevard de l'Université
Université du Québec à
Chicoutimi
Chicoutimi (Québec)
G7H 2B1

CIDN:

1641 0200001

ELDERLY/PERSONNES ÂGÉES

Ongoing Projects/Projets en cours

WORKSHOP ON HOUSING OPTIONS FOR CANADIANS WITH DEMENTIA

Objective:

To increase public awareness of the range and types of housing options that are, and could be, available to Canadians with dementia, by giving prominence to information on housing, support technology, and in particular by providing information on relevant research that CMHC is currently undertaking.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and Research

Contractor:

Alzheimer Society of Canada
1320 Yonge Street
Toronto, Ontario
M4T 1X2

CIDN:

1591 0200001

ENERGY CONSERVATION/ÉCONOMIES D'ÉNERGIE

Completed Reports/Rapports terminés

ENERGY EFFICIENCY TECHNOLOGY IMPACT: APPLIANCES.

Prepared by Thermal Engineering. Prepared for Technical Policy and Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996. 2 volumes.

Volume 1. Main report

Volume 2. Appendices

This project studies the effect of appliance efficiency on the overall residential end-use energy consumption in Canada, based on simulation studies conducted on the Expanded STAR database using the ENERPASS building simulation program. Included in this work was an evaluation of improved appliance efficiency effects on atmospheric CO₂ emissions as well as heating fuel substitution effects on energy consumption and atmospheric emissions.

The study included many tasks. Files for 239 houses in the Hot-2000 data base were converted to augment the newly corrected CMHC STAR-Housing data base which was then converted into both an ENERPASS and a Hot-2000 database for a total of 937 houses. The validity of the Expanded STAR database was assessed by comparing the distribution of houses, fuel consumption and type of fuels used in the database with Canadian statistics. The average annual end-use energy consumption per household, estimated from the baseline simulation done on the entire Expanded STAR database, was also compared to the Canada-2 housing stock model. It was found that the Expanded

STAR database is acceptably accurate at the national level although less accurate on a regional basis.

Based on the research performed, the following trends are apparent. An improvement in appliance efficiency corresponds to an increase in space heating energy requirements as well as a decrease in domestic hot water heating and appliance fuel consumption. The savings associated with the improvement of appliance efficiencies only is less than 1% for 10% market penetration of high efficiency appliances, and less than 1.5% for 20% penetration. When energy saving measures, such as building envelope and mechanical system improvements, are adopted along with high efficiency appliances overall savings can be as high as 4.2% of the total for 10% market penetration of energy saving measures.

CO₂ emission reduction is found to be very close in magnitude to energy consumption savings. The potential to reduce the CO₂ emissions by improving only the appliance efficiencies is less than 1%, depending on the level of efficiency improvements for a 10% penetration of improved appliances in the residential market. Emission reduction increases linearly with market penetration level. This potential increases to as much as 4.2% for a market penetration level of 10%, and to 8.4% for a market penetration level of 20% when other whole house energy saving measures are incorporated with appliance efficiency improvements.

An evaluation of two fuel substitution scenarios found that significant reductions in both total energy consumption and CO₂ emissions in Canada can be achieved by substituting certain fuels for others. However, it should be noted that these findings are only applicable to the two scenarios evaluated, and general conclusions cannot be drawn from these results.

LES RÉSEAUX DE VILLES EN EUROPE : ÉTUDE.

Préparé par Lise Brousseau, Association québécoise pour la maîtrise de l'énergie (AQME). Préparé pour Relations internationales, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1993 c.-à-d. 1996.

Cette étude a été rédigée par l'Association québécoise pour la maîtrise de l'énergie (AQME) dans le but d'examiner les activités menées par plusieurs villes européennes dans le domaine de la gestion de l'énergie. L'étude aborde deux sujets principaux. Tout d'abord, elle contient des renseignements sur les villes européennes, recueillis par l'AQME au cours de visites effectuées à l'automne 1992. Puis, elle explique comment le concept de réseau canadien d'échange d'informations sur l'énergie a évolué au sein de l'AQME, particulièrement au cours de ses congrès annuels. L'étude vise à connaître l'implication des villes européennes dans le domaine de la maîtrise de l'énergie tant au niveau de la gestion du patrimoine local que de la gestion énergétique territoriale et à connaître la nature et l'implication des réseaux d'échange entre les villes concernant l'énergie et l'environnement. Ces réseaux sont Cité-Vie (France), Cité de l'énergie (Suisse), Énergie-Cité (OCDE) et Ville-Énergie (Allemagne).

ENERGY CONSERVATION/ÉCONOMIES D'ÉNERGIE

Completed Reports/Rapports terminés

Les membres de la délégation ont rapidement découvert que le concept d'efficacité énergétique en Suisse, en France et en Allemagne est intimement lié à l'environnement et que ceci est une conséquence directe d'une gestion locale des enjeux énergétiques et environnementaux. En effet, la gestion de l'énergie, des déchets et du transport urbain contribuent à considérer la fonction efficacité énergétique dans son contexte global. Les organisations qui s'en occupent dans ces pays sont locales et ceci fait en sorte qu'il y a intégration complète de la gestion de l'énergie et de l'environnement. Au Canada, l'implication des gouvernements, pour qui les fonctions énergie et environnement sont gérées par des entités différentes, ne favorisent pas autant l'intégration des deux fonctions. La gestion centralisée de la production et de la distribution de l'énergie contribue bien sûr à cet état de fait.

Au cours de cette mission, les représentants des gouvernements fédéral et provincial ainsi que ceux de la ville de Montréal ont conclu qu'il serait opportun de mettre en place un réseau de villes au Québec, un réseau qui pourrait rapidement s'étendre au reste du Canada et à l'Amérique du Nord.

Ongoing Projects/Projets en cours

ENERGY AUDITS OF TEN HIGH-RISE RESIDENTIAL BUILDINGS

Objective:

Determine the total energy gain and losses for ten high-rise buildings across the country. The buildings are those that have been surveyed for air leakage in the previous project "Field Investigation of Air Leakage, Air Movement and Indoor Air Quality".

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research Division

Contractor:

Scanada Consultants Limited
436 MacLaren Street
Ottawa, Ontario
K2P 0M8

CIDN:

1291 0300001

ENVIRONMENTAL IMPACT STUDY OF HOUSING-ENERGY EFFICIENCY TECHNOLOGY IMPACT

Objective:

To refine the REES program and run additional simulations of residential retrofit activities.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research Division

Contractor:

SAR Engineering Limited
8884-15th Avenue
Burnaby, British Columbia
V3N 1Y3

CIDN:

0847 0203001

INDOOR ENVIRONMENT AND ENERGY CONSUMPTION CHARACTERISTICS OF MID-RISE RESIDENTIAL BUILDINGS

Objective:

Assess the indoor environment and energy consumption on characteristics of eight mid-rise residential buildings.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research Division

Contractor:

Scanada Consultants Limited
446 Reynolds Street
Oakville, Ontario
L6J 3M4

CIDN:

1373 0200001

**MONITORING OF THE
ENERGY EFFICIENT
APARTMENT BUILDINGS
AND MECHANICAL
SYSTEMS**

Objective:

To carry out monitoring of the energy efficient apartment buildings and mechanical systems at 3015 Parkhill Road, Mississauga.

MHC Project Officer:

W. Webster

Division:

Technical Policy and Research
Division

Contractor:

Tatry Pathway Co-Ownership
3015 Parkhill Road
Mississauga, Ontario
L5B 4B3

IDN:

1260 0800001

**PROGRAMME NOUVEAU
CONFORT HYDRO-QUÉBEC**

Objet :

Produire tout le matériel nécessaire aux cours de formation portant sur le Programme Nouveau confort Hydro-Québec. Organiser et donner une session de formation à l'intention des formateurs. Réviser le matériel de formation et des guides pour tous les modules en fonction de l'expérience des maisons-témoins.

Agent de projet pour la SCHL :

T. Kerwin

Division :

Division des politiques et de la
recherche en matière technique

Contractant :

Le service de conseillers
techniques en habitation LHW
inc.
2062 Germain
Longueuil (Québec)
J4N 1L9

NIC :

1725 0300004
1725 0300002

ENVIRONMENTAL POLLUTION AND CONTROL POLLUTION DE L'ENVIRONNEMENT ET SON CONTRÔLE

Completed Reports/Rapports terminés

TRANSPORT OF CONTAMINATED GAS AND DUST IN HIGH-RISE APARTMENT BUILDINGS.

Prepared by Jacques Whitford Environmental Limited and Morrison Hershfield Limited. Project Team: Ted N. Hergel, Mark Lawton and Cindy Warwick. Prepared for Technical Policy and Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996.

This study investigated the hypothesis that a high-rise apartment building with an underground parking garage can create an adequate concentration-reducing buffer between entry points for gaseous or dust contaminants and living spaces. Three main tasks were undertaken to fulfill the objectives of the research project: a literature search examining the risk associated with fugitive dust in high-rise apartment buildings; an evaluation of transfer paths of gaseous phase contaminants using perfluorocarbon tracer gas; and an evaluation of the effect of ventilation systems on the transfer paths of gaseous phase contaminants using sulfur hexafluoride (SF₆) tracer gas.

Based on the literature search conducted, it was concluded that the risk to high-rise apartment dwellers from contaminated dust is less than the risk to dwellers in single-unit homes. Emissions of dust can be reduced or eliminated at the contaminant source, and the number of exposure pathways are reduced by the building envelope and the limited on-site outdoor activities available at a high-rise building area.

Tracer gases can be transported through the high-rise apartment buildings by means of direct or indirect pathways. Indirect pathways pass through the parking garage area and the concentrations of tracer gases are buffered by dilution in this area. Direct pathways do not travel through the general garage space. Concentrations of tracer gases in building living spaces were found to be highest due to direct transport pathways.

The study has determined that gas transfer pathways are present in the high-rise buildings researched and that these pathways are not just stack-induced, seasonal phenomena. Generally, it was found that the dominant direct pathway for gas transfer was between the elevator sump pit and the upper floor living space. Results were compared to the gas concentrations that would exist if the tracer gas were equally mixed throughout the building. In upper floors, tracer gas concentrations as high as three times the fully mixed model were found during winter testing when stack forces were present. However, these concentrations were still 3 to 5 orders of magnitude less than the concentration at the point of entry into the garage. During summer testing, normalized tracer gas concentrations were found to be only marginally higher than the fully mixed scenario.

ENVIRONMENTAL SKILLS REGISTER, GREEN BUILDING INFORMATION COUNCIL (GBIC)

Objective:

To develop an Environmental Skills Register (ESR) that incorporates the interests of CMHC.

CMHC Project Officer:

P. Russell

Division:

Technical Policy and Research Division

Contractor:

Green Building Information Council
130 Lewis Street
Ottawa, Ontario
K2P 0S7

CIDN:

1698 0300001

EVALUATION OF POLLUTANT SOURCE STRENGTHS AND CONTROL STRATEGIES IN CONVENTIONAL AND R2000 HOUSES

Objective:

Conduct a study to evaluate the pollutant source strengths and control strategies in three new conventional and three new R-2000 houses.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research Division

Contractor:

Ortech International
2395 Speakman Drive
Mississauga, Ontario
L5K 1B3

CIDN:

1585 0200001

MATERIAL ODOUR EMISSIONS TEST METHODS: REVIEW AND EVALUATION ON EMISSIONS

Objective:

To evaluate the various odour emission protocols.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research Division

Contractor:

Ortech International
2395 Speakman Drive
Mississauga, Ontario
L5K 1B3

CIDN:

1244 0201007

PASSIVE MONITORS FOR ORGANIC POLLUTANTS IN INDOOR AIR

Objective:

The study will establish the use of active carbon cloth (ACC) as a passive monitor for determining the identity and concentration of pollutants in indoor air.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Dr. Hyman D. Gesser
University of Manitoba
350 Parker Building
Winnipeg, Manitoba
R3T 2N2

CIDN:

1639 0200001

PLANNING, DESIGN AND CONSTRUCTION OF THE BARRHAVEN MULTI-UNIT HOUSING FOR THE ENVIRONMENTALLY HYPERSENSITIVE

Objective:

Prepare a report dealing with the design and construction of the Barrhaven Multi-Unit Housing to provide as complete information as possible for someone wishing to learn about the project or someone intending to build a similar project.

CMHC Project Officer:

V. Salares

Division:

Technical Policy and Research Division

Contractor:

Jools Development
General Delivery
Combermere, Ontario
K0J 1L0

CIDN:

1686 0300001

ENVIRONMENTAL POLLUTION AND CONTROL POLLUTION DE L'ENVIRONNEMENT ET SON CONTRÔLE

Ongoing Projects/Projets en cours

RADON BOOKLET

Objective:

To create a national version of a guidance booklet on radon, designed for both builders and householders.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research
Division

Contractor:

Ken Klassen
58 Fulham Avenue
Winnipeg, Manitoba
R3N 0G2

CIDN:

1658 0200001

REVIEW OF PAINT EMISSION STUDIES USING TRADITIONAL METHODS AND RECENT CHAMBER STUDIES

Objective:

To search international databases; review studies; evaluate the significance of the findings; draft a CSIRO document; and have the document reviewed by the industry.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research
Division

Contractor:

CSIRO, Australia
Graham Road
P.O. Box 56
Highett, VC 3190

CIDN:

1244 0201006

ROUND-ROBIN TESTING OF VOLATILE ORGANIC (VOC) EMISSIONS FROM COMMON BUILDING MATERIALS

Objective:

To carry out a joint research project round-robin testing of volatile organic (VOC) emissions from common building materials.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research
Division

Contractor:

Saskatchewan Research Council
15 Innovation Blvd.
Saskatoon, Saskatchewan
S7N 2X8

CIDN:

1244 0201008

A SURVEY OF ELECTROMAGNETIC FIELD LEVELS IN CANADIAN HOUSING

Objective:

To review the state-of-the-art in knowledge and housing research into EMF and prepare an interim report, to conduct a field survey of EMF levels in

representative housing, and to prepare a report on the findings with recommendations for remedial measures.

CMHC Project Officer:

C. Ives

Division:

Technical Policy and Research
Division

Contractor:

The Planetary Association for
Clean Energy Inc.
100 Bronson Avenue
Suite 1001
Ottawa, Ontario
K1T 6G8

CIDN:

1051 0200001

FIRE PREVENTION INCENDIES -- PRÉVENTION

Ongoing Projects/Projets en cours

IT COULD NEVER HAPPEN TO ME: HIGH RISE FIRE SAFETY EDUCATION CAMPAIGN

Objective:

To develop, produce and distribute materials in support of a national high rise fire safety education campaign for use by fire service personnel and other stakeholders of fire prevention, managers of high-rise buildings, broadcasters, and the general public.

CMHC Project Officer:

T. Green

Division:

Technical Policy and Research
Division

Contractor:

Carleton Productions
International Incorporated
P.O. Box 5069
Merivale Depot Broadcasting
House
3rd Floor
1500 Merivale Road
Ottawa, Ontario
K2C 3H3

CIDN:

1610 0300001

HEATING & VENTILATION CHAUFFAGE ET VENTILATION

Completed Reports/Rapports terminés

EFFICIENCY IMPROVEMENT TIMELINES FOR RESIDENTIAL VENTILATION EQUIPMENT: FINAL REPORT.

Prepared by Buchan, Lawton, Parent Ltd. Prepared for Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.

There is a major shift taking place in the role of ventilation in housing. Houses need continuous, controllable, unobtrusive and energy-efficient ventilation if they are to provide safe and healthy indoor environments.

In recognition of the impact that the introduction of energy-efficient ventilation devices will have on national electrical energy consumption patterns, Canada Mortgage and Housing Corporation (CMHC) and the Ontario Ministry of the Environment and Energy sponsored this initiative to facilitate the integration of more efficient equipment into industry product lines.

Canadian residential ventilation industry members involved in the manufacture and distribution of exhaust equipment, HRVs and furnace fans were provided with a briefing document. Industry members attended a meeting and responded positively to the concept of efficiency improvement timelines for residential ventilation equipment. Given the variation in operating conditions of ventilation equipment, the industry decided that it would be best to group equipment by function, and develop timelines for each product type separately. Industry members separated into groups to develop timelines for exhaust equipment, heat recovery ventilators, and circulation equipment.

The timelines presented in this documents will make it possible to:

- ° compare fairly the motor/fan set efficiency of residential ventilation devices,
- ° provide a fair and level playing field throughout the process for manufacturers,
- ° reduce the average electricity usage of ventilation devices within each category over time, and
- ° provide the framework for further reasonable upgrades to mandatory requirements and their enforcement.

PERFORMANCE MONITORING OF A BUBBLE PUMPED SOLAR DOMESTIC HOT WATER SYSTEM.

Prepared by P.D. Makuch and S.J. Harrison, Solar Calorimetry Laboratory, Queen's University. Prepared for Bubble Action Pumps Ltd. Ottawa: Canada Mortgage and Housing Corporation, 1995. (Housing Technology Incentives Program)

The bubble pump developed by Bubble Action Pumps Ltd. is a concept that has the potential to be inherently reliable. It is unique in its design in that it has no moving parts and during operation requires no external electrical or mechanical input to operate. It is self regulating, in that it circulates anti-freeze, transporting heat from an elevated thermal source to a lower elevation. An ideal application for this technology is the transport of heat from roof mounted

solar collectors to a thermal storage located at a lower level. This configuration exists in solar domestic hot water (SDHW) systems located in cold climates.

During 1987 and 1992 prototypes of the bubble pump were tested in the Solar Calorimetry Laboratory under controlled conditions. Since that time, a number of significant modifications and improvements have been made in the design to increase its performance and ease of manufacture. In response to the continued refinement and development of the bubble pump, it was considered important to evaluate its performance on a real installation located outside of the laboratory environment. Consequently, a bubble pumped SDHW system was installed on a municipally owned row house and was instrumented with a remote data acquisition system to evaluate its performance. This report describes the monitoring and evaluation of this system.

During the monitoring period, the system delivered 1.17 MWh of solar energy to the load; however, system efficiency was lower than expected because of low hot water load. Performance was observed to increase toward the end of the monitored period as hot water demand and solar insolation increased. Estimates, based on six of the monitored months, indicated that annual system efficiencies and solar fractions of 19% and 41% are representative of the system's operation under modest load conditions, i.e., 180 to 245 L/day. It is expected that overall system efficiency will increase as daily hot-water-demand increases toward the design value of 300 L/day.

SURVEY OF NORTH AMERICAN HEAT EXCHANGER INTEGRITY TEST METHODS.

Prepared by Martin Thomas, Canadian Gas Research Institute. Prepared for Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996.

This survey has been carried out as part of a larger project in which the intention is to develop an improved field test method for furnace heat exchanger crack/leak detection, which is repeatable, reliable, practical in field use and preferably quantitative. The need for this work has arisen from a rising number of complaints from home owners on the subject of furnace "red-tagging" due to a cracked heat exchanger. In many cases the heat exchanger may be cracked but will not present a threat to the homeowner. One major manufacturer has stated that they expect their heat exchangers to develop some innocuous stress relieving cracks after the first few months of operation. On the other hand, a furnace heat exchanger may show no signs of cracks but may leak due to either a design or construction flaw.

The survey was carried out by a combination of telephone contact and sending questionnaires to a total of 53 utilities in Canada and the U.S.A. These utilities were identified from an American Gas Association (AGA) survey of utilities and their services made in 1993. Out of the 53 utilities contacted 41 (77%) responded. The survey shows that almost all responding utilities are using a visible inspection of the heat exchanger and flame pattern in conjunction with a more detailed test if the service engineer is suspicious of a leak/crack. However, only about 15% of the respondents are using a quantitative method.

Through the survey and past work conducted by the Gas Research Institute (GRI), the Canadian Gas Research Institute (CGRI), and CMHC some 15 different test methods have been identified. Conclusions drawn from the survey indicate that no one test method stands out as being a clear candidate for development, however, due to deficiencies or over-sensitivity in some methods; a process of elimination suggests that the AGA/GRI test method, the CMHC test method, and CO/CO₂ monitoring in the flue and circulating air be evaluated.

This report recommends that the above tests be evaluated against an absolute measurement of heat exchanger leakage to determine the effectiveness of each test method. A suggestion is made that the current allowable leakage from direct vent furnaces (2% of combustion products) be used as a measure of the immediate hazard, but warns that further work would be required to establish this value as acceptable. The further work could be carried out as a theoretical study to predict potential indoor air CO/CO₂ concentrations.

VENTILATION SYSTEM FOR NEW AND EXISTING HOUSES WITH BASEBOARD HEATING.

Prepared by James T. Reardon, Institute for Research in Construction, National Research Council Canada. Prepared for Technical Policy and Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.

Houses with forced-air heating systems which circulate air to most rooms in the house through ducts are generally regarded as well ventilated when the furnace fan is operating. Houses with alternative heating systems which do not include ducts may not experience enough ventilation air supply or adequate air distribution. This project examined five simple ventilation systems suitable for houses without forced-air heating systems. Four of the simple ventilation systems were exhaust-only: using either only local exhaust fans in the kitchen and bathrooms or the local exhaust fans supplemented with a partially distributed exhaust system with pickups in each bedroom. Each of these exhaust-only approaches were tested with deliberate passive inlet vents (both distributed or centralized) both open and closed. The fifth system was a supply and exhaust system with minimally-sized ducts supplying ventilation air to each habitable room, and the local exhaust fans providing the exhaust.

The five ventilation systems were installed in the NRC two-storey research house which also has an electric forced-air heating system. The ventilation performance of each system was measured for a variety of weather conditions using single and multiple tracer gas techniques. Their air change rates and room-by-room ventilation rates were measured and compared with similar reference measurements in the house with no ventilation and with only the forced-air furnace fan operating.

The exhaust-only system using only local exhaust fans with no passive inlet vents open was found to provide inadequate ventilation performance, only marginally better than simple air leakage alone. With the distributed passive inlet vents open the local exhaust system was found to over ventilate the ground floor rooms and still underventilate the upper storey bedrooms. The partially distributed exhaust system was effective at improving the ventilation air distribution to the bedrooms, especially with a centralized passive inlet vent open. The minimal ducted supply system provided the required air distribution to all the habitable rooms.

HEATING & VENTILATION CHAUFFAGE ET VENTILATION

Ongoing Projects/Projets en cours

CONTRÔLE PERFORMANT DES SYSTÈMES DE VENTILATION ET DE L'HUMIDITÉ DANS LES RÉSIDENCES

Objet :

Propose and evaluate a control strategy and controlling equipment for ventilation systems with or without heat recovery capabilities.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Pierre Hosatte
7744, Sherbrooke Est
Bureau 204
Montréal (Québec)
H1L 1A1

NIC :

1635 0200001

DEVELOPMENT OF CONSUMER ADVISORY DOCUMENTS FOR RESIDENTIAL HEAT RECOVERY VENTILATORS

Objective:

Develop consumer advisory documents for residential heat recovery ventilators.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research Division

Contractor:

Galbraith Communications
Suite 200
440 Laurier Avenue West
Ottawa, Ontario
K1R 7X6

CIDN:

1584 0200001

DEVELOPMENT TESTING AND PROVING OF CHINOOK ADVANCED EARTH ENERGY HEAT PUMP

Objective:

To complete the design and drawings of the Hotspring water to water series and the electrical and electronic controls for both series and make them CEBus and Smart Houses compatible.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Chinook Phi Beta Corporation
5480 Canotek Road
Ottawa, Ontario
K1J 9H7

CIDN:

0943 0200001

DEVELOPMENT TESTING AND PROVING OF CHINOOK ADVANCED GAS-FIRED HYDRONIC AIR HANDLER

Objective:

To complete and test the prototype. Field testing and demonstration to take place at the Advanced Houses using

prototypes and at several sites using reproduction units in standard market installation configurations. All these installations to be monitored and reported upon and the results used to improve the production units.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Chinook Phi Beta Corporation
5480 Canotek Road
Ottawa, Ontario
K1J 9H7

CIDN:

1072 0200001

DRAIN GAIN

Objective:

To test and evaluate the drain gain, a waste water heat recovery exchanger and storage device aimed at the residential market.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Winston MacKelvie
Box 1156
Knowlton (Québec)
J0E 1V0

CIDN:

1443 0200001

HEATING & VENTILATION CHAUFFAGE ET VENTILATION

Ongoing Projects/Projets en cours

FIELD STUDY OF OCCUPANT INTERACTIONS AND VENTILATION EFFECTIVENESS OF HEAT RECOVERY VENTILATION SYSTEMS

Objective:

To conduct a field study of occupant interactions and ventilation effectiveness of heat recovery ventilation systems.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

Buchan Lawton Parent Limited
30 East Beaver Creek
Suite 210
Richmond Hill, Ontario
L4B 1G6

CIDN:

1376 0200001

HVAC DESIGN AND INSTALLATION PRACTICES IN MID AND HIGH-RISE BUILDINGS

Objective:

To conduct a study to evaluate the changes required to existing HVAC design and installation practices in mid and high-rise buildings in order to ensure compliance with the 1995 National Building and Energy Codes and to study the performance of ventilation systems within these types of buildings.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

Sheltair Scientific Ltd.
#2 - 3661 West 4th Avenue
Vancouver, British Columbia
V6R 1P2

CIDN:

1424 0200001

IDENTIFYING AND REMOVING POLLUTANTS FROM HEAT RECOVERY VENTILATORS

Objective:

Determine whether dedicated ventilation systems harbour unhealthy levels of dust, mould and/or fungi; whether existing duct cleaning methods are successful at lowering those levels; and to develop recommendations and guidelines for builders and homeowners for the maintenance of dedicated residential systems.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Terry Watters
Rural Route #3
Comp 308
Wolfville, Nova Scotia
B0P 1X0

CIDN:

1652 0200001

INVESTIGATE HEATING AND VENTILATING SYSTEMS FOR REMOTE HOUSING

Objective:

To conduct a study to investigate heating and ventilating systems for remote housing.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

Howell-Mayhew Engineering
Inc.
15006-103 Avenue
Edmonton, Alberta
T5P 0N8

CIDN:

1481 0200001

OPERATING MECHANICAL AND ELECTRICAL EQUIPMENT AND SYSTEMS IN MEDIUM & HIGH-RISE RESIDENTIAL BUILDINGS

Objective:

Develop reference documents and training materials for operating mechanical and electrical equipment and systems in medium and high-rise residential buildings.

CMHC Project Officer:

W. Webster

Division:

Technical Policy and Research
Division

Contractor:

Efficiency Engineering
Incorporated
887 Langs Drive
Suite 2
Cambridge, Ontario
N3H 5K4

CIDN:

1250 0200001

**OPTIMIZE RESIDENTIAL
HVAC DUCTWORK
SYSTEMS****Objective:**

To conduct a study to assess the potential to optimize residential HVAC ductwork systems.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

Allen Associates
400 Mount Pleasant Road
Suite 5
Toronto, Ontario
M4S 2L6

CIDN:

1431 0200001

**OVERHEATING AS A
FACTOR IN HOUSE DESIGN****Objective:**

To create the tools for providing advice to house designers on the subject of overheating.

CMHC Project Officer:

F. Grammenos

Division:

Technical Policy and Research
Division

Contractor:

SAR Engineering Limited
8884-15th Avenue
Burnaby, British Columbia
V3N 1Y3

CIDN:

1567 0200001

**PERFORMANCE
QUANTIFICATION ON
SINGLE WELL HEAT PUMP****Objective:**

To quantify the performance of an existing open loop ground source heat pump system which uses a single domestic water well for both its supply and discharge requirements, and to demonstrate that a single well can be used as both the supply and discharge source for open loop ground water heat pump systems.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
Housing Technology Incentives
Program

Contractor:

Bob Vasily and Associates
RR #1
Seeley's Bay, Ontario
K0H 2N0

CIDN:

1267 0200001

**POÊLES À BOIS ET
QUALITÉ DE L'AIR
INTÉRIEUR****Objet :**

Comparer la qualité de l'air intérieur entre des maisons de la région de Québec utilisant un poêle à bois comme source de chauffage à d'autres habitations qui n'en utilisent pas.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

Benoît Lévesque
Médecin-conseil en santé
environnementale
Centre de santé publique de
Québec
2050, boulevard René-Lévesque
Ouest
Sainte-Foy (Québec)
G1V 2K8

NIC :

1459 0200001

**RENOVATION AND
VENTILATION: A SURVEY
OF CONTRACTOR
AWARENESS OF
VENTILATION ISSUES****Objective:**

To conduct a study to examine contractors' awareness of healthy housing issues and to identify industry information needs and technology transfer opportunities.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

Reid/Foster Associates
654 MacLaren Street
Ottawa, Ontario
K1R 5L2

CIDN:

1538 0300001

HEATING & VENTILATION CHAUFFAGE ET VENTILATION

Ongoing Projects/Projets en cours

SUPPORT FOR THE HEAT EXCHANGER LEAKAGE STUDY

Objective:

To carry out "support for the heat exchanger leakage study".

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research Division

Contractor:

Geddes Enterprises
45 Massey Street
Brampton, Ontario
L6S 2V8

CIDN:

1505 0200002

TECHNICAL REVIEW OF THE DEVELOPMENT OF CONSUMER HEAT RECOVERY VENTILATION ADVISORY DOCUMENTS

Objective:

Provide technical review of consumer directed, heat recovery advisory documents. Provide a written commentary on materials.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research Division

Contractor:

Air Solutions Inc.
44 Darren Crescent
Cambridge, Ontario
N3C 3Y1

CIDN:

1584 0201001

WEATHER DATA FOR SOLAR HEATING APPLICATIONS

Objective:

To generate a base of climatic data that can be used to analyse and evaluate the performance of passive solar dwellings.

CMHC Project Officer:

W. Webster

Division:

Technical Policy and Research Division

Contractor:

Environment Canada Climate and Water Information Branch
4905 Dufferin Street
Downsview, Ontario
M3H 5T4

CIDN:

1745 0300001

HIGH-RISE CONSTRUCTION CONSTRUCTION D'IMMEUBLES DE GRANDE HAUTEUR

Ongoing Projects/Projets en cours

ANALYSIS OF OPERATING EXPENDITURES IN PRIVATE SECTOR RESIDENTIAL HIGH-RISE BUILDINGS

Objective:

To develop operating cost profiles for the limited sample of private sector cost data received from the industry associations BOMA and REIC and make comparisons with social housing data previously obtained.

CMHC Project Officer:

W. Webster

Division:

Technical Policy and Research
Division

Contractor:

Ark Research Associates
165 Hinton Avenue North
Ottawa, Ontario
K1Y 0Z9

CIDN:

1024 0200004

COMPARTMENTALIZATION OF EXISTING HIGH-RISE APARTMENT BUILDINGS

Objective:

Determine the practicality of compartmentalizing existing apartment buildings and determining the effectiveness of compartmentalization on controlling unwanted air change, energy costs and comfort problems.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Mark Lawton Building Science
Specialists and
Morrison Hershfield Limited
2440 Don Reid Drive
Ottawa, Ontario
K1H 8P5

CIDN:

1655 0200001

CONDITION SURVEY OF HIGH-RISE STOCK

Objective:

Establish a research and survey design methodology for assessing the physical condition and state of repair, including the costs of upgrading to extend the longevity, of the high-rise rental housing stock, and to conduct a statistically valid sample survey of that stock in the City of Toronto.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

Contractor:

Corporation of the City of
Toronto
City Hall
100 Queen Street West
Toronto, Ontario
M5H 2N2

CIDN:

1561 0300001

DESIGN AND IMPLEMENTATION OF INNOVATIONS AT COLOMBUS HOUSE SHERWOOD PARK, NEAR EDMONTON, ALBERTA

Ojective:

Design conception and implementation of the innovations to be integrated into Columbus House, a high-rise residential building that will be constructed in Sherwood Park, near Edmonton, Alberta.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

Contractor:

Howell-Mayhew Engineering
Inc.
15006-103 Avenue
Edmonton, Alberta
T5P 0N8

CIDN:

0840 0302005

HIGH-RISE CONSTRUCTION CONSTRUCTION D'IMMEUBLES DE GRANDE HAUTEUR

Ongoing Projects/Projets en cours

EVALUATION OF POLLUTANT SOURCE STRENGTHS AND CONTROL STRATEGIES IN AN INNOVATIVE HIGH-RISE RESIDENTIAL BUILDING

Objective:

To evaluate the pollutant source strengths and control strategies in an innovative residential high-rise building.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division
Panel on Energy Research and
Development

Contractor:

SIRICON
1455 Boulevard Maisonneuve
Ouest
Montréal, Québec
H3G 1M8

CIDN:

1557 0200001
1557 0300001
1557 0800001

HEAT, AIR AND MOISTURE TRANSFER IN HIGH-RISE BUILDING ENVELOPES

Objective:

Analysis of the hygrothermal behaviour of residential building components and document the results in a final report.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

National Research Council
Canada
Institute for Research in
Construction
Building M-20
1200 Montreal Road
Ottawa, Ontario
K1A 0R6

CIDN:

0719 0200001

HIGH-RISE APARTMENT REPAIR NEEDS ASSESSMENT

Objective:

Prepare a paper outlining issues surrounding high-rise apartment repair needs.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

Contractor:

Kerr Associates
425 Pefferlaw Road
Pefferlaw, Ontario
L0E 1N0

CIDN:

1701 0300001

MONITOR THE PERFORMANCE OF A HIGH-RISE RESIDENTIAL BUILDING ENVELOPE RETROFIT

Objective:

To study the impact of retrofits on the heat, air and moisture transport characteristics of newly renovated envelopes.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

Morrison Hearshfield Building
Science Specialists
2440 Don Reid Drive
Ottawa, Ontario
K1H 8P5

CIDN:

1602 0800001

PERFORMANCE CONTRACTING IN MULTI-UNIT RESIDENTIAL BUILDINGS

Objective:

Validate the opportunities and effectiveness of energy and water performance contracting in the multi-unit residential sector.

CMHC Project Officer:

W. Webster

Division:

Technical Policy and Research
Division

Contractor:

Alan Levy Consulting
48 Reeve Drive
Markham, Ontario
L3P 6B9

CIDN:

1560 0200001

HOME OWNERSHIP HABITATIONS -- POSSESSION

Ongoing Projects/Projets en cours

IDENTIFYING THE IMPEDIMENTS TO BUYING A HOUSE

Objective:

To conduct a survey of people searching for houses. The survey will ask questions about the duration of time already spent searching; the number of houses inspected without selecting one of them; ... etc.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Dr. Paul Anglin
Associate Professor
University of Windsor
Department of Economics
401 Sunset Avenue
Windsor, Ontario
N9B 3P4

CIDN:

1650 0200001

HOUSE CONSTRUCTION HABITATIONS - - CONSTRUCTION

Completed Reports/Rapports terminés

THE ECONOMIC IMPACTS OF MULTIPLE SELF-HELP HOUSING IN CANADA.

Prepared by ARC, Andy Rowe Consultants Inc. Prepared for Canadian Housing and Renewal Association and Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1994, i.e., 1996.

This report assesses the economic and fiscal impacts which would result from the creation of multiple self-help housing to address the need for affordable housing. Working from two assumptions - that, in a time of fiscal restraint, governments can still do much to contribute to the development of needed housing without incurring ongoing subsidy costs and that low-income households are not presently engaged in self-help housing but could be encouraged to do so, this report attempts to set out the likely benefits to government in revenues and in the achievement of public policy objectives which self-help housing could generate. The basic assumptions underlying this study are that low-income households in Canada are not currently being adequately housed and that private market housing cannot meet these needs, in part because of the costs of construction.

It has been shown that self-help can significantly reduce the costs, and may bring it within reach of those in need. This leads to the suggestion that multiple self-help housing by low- and moderate-income households could generate benefits to government, since such housing is not currently being produced. It is estimated that, for every \$1 million spent on multiple housing in Canada, the federal and provincial governments receive over \$210,000 in revenue

HOUSE CONSTRUCTION HABITATIONS -- CONSTRUCTION

Completed Reports/Rapports terminés

from income taxes paid on labour and provincial and federal sales taxes on materials. Additional corporate income taxes are generated and municipalities realize both development charges and property taxes on the resulting 15 units of housing.

Should governments act to encourage multiple self-help housing for low- and moderate-income households, the same expenditure is estimated to generate over \$237,000 in federal and provincial government revenues, again with other corporate taxes, development charges and property taxes being generated. The \$1 million in expenditures would result in the creation of 23 units of needed housing. It has been estimated elsewhere that this results in the creation of up to 30 person years of direct and indirect employment.

Ongoing Projects/Projets en cours

DEVELOPMENT OF COMMERCIALLY VIABLE CONCEPTS AND A DESIGN FOR A RESIDENTIAL FRAMING SYSTEM FOR A MONOCOQUE HOUSE

Objective:

To undertake the development of commercially viable concepts and a design for a residential framing system for a monocoque house, to provide on-site guidance during the construction of prototypes of the design and to undertake post construction performance monitoring of the structures.

CMHC Project Officer:

R. Duncan

Division:

Technical Policy and Research
Division

Contractor:

Gower, Yeung & Associates
615 Eighth Street
Suite 201
New Westminster, British
Columbia
V3M 3S3

CIDN:

0657 0300001

DEVELOPMENT OF THE EARTHQUAKE RESISTANT DESIGN PUBLICATION

Objective:

To prepare a manuscript including footnoted references and a supplementary readings list. The final book will be published in soft cover format, with illustrations and photographs.

CMHC Project Officer:

T. Marshall

Division:

Technical Policy and Research
Division

Contractor:

Pro Pacific Architecture Ltd.
12440 Alma Street
Vancouver, British Columbia
V6R 3R7

CIDN:

1355 0301001

ENVIRONMENTAL SUSTAINABILITY: IMPEDIMENTS TO CONSTRUCTION WASTE REDUCTION IN ONTARIO

Objective:

Examine past and existing initiatives and determine the most successful waste minimization practices. Create a tool to facilitate education and stimulate widespread implementation of waste reduction practices.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Teresa Paul
Habitat Associates
55 Cambridge Street
Guelph, Ontario
N1H 2V1

CIDN:

1653 0200001

HOUSING DE-CONSTRUCTION

Objective:

To investigate and carry out a de-construction procedure on a house to make it more economically and environmentally viable compared to current housing demolition practices.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Vince Catalli
Design Consultants
2-417 Bronson Avenue
Ottawa, Ontario
K1R 6J6

CIDN:

1439 0200001

AN INFORMATION AND TRAINING NEEDS ANALYSIS FOR THE CANADIAN HOME INSPECTION INDUSTRY

Objective:

Undertake and complete "An Information and Training Needs Analysis for the Canadian Home Inspection Industry."

CMHC Project Officer:

T. Marshall

Division:

Technical Policy and Research Division

Contractor:

Energy Technology Access Group Inc.
2308 Arlington Avenue
Saskatoon, Saskatchewan
S7L 3L3

CIDN:

1539 0300001

SERVICEABILITY OF FLOORS BUILT WITH WOOD I - JOISTS AND CONCRETE TOPPING

Objective:

Evaluate the changes in floor stiffness and vibration characteristics before and after the addition of a concrete topping to floor systems constructed with wood I - joists and a wood-based flooring.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Dr. Ying Hei Chui
Associate Professor
University of New Brunswick
P.O. Box 44555
Fredericton, New Brunswick
E3B 6C2

CIDN:

1651 0200001

STUDY OF SEAM TELEGRAPHING PROBLEMS IN RESIDENTIAL FLOORING

Objective:

Identify and determine what can be done to minimize the seam telegraphing problems in residential flooring currently being experienced by the housing industry across Canada.

CMHC Project Officer:

T. Marshall

Division:

Technical Policy and Research Division

Contractor:

Canadian Home Builders' Association
150 Laurier Avenue West
Suite 200
Ottawa, Ontario
K1P 5J4

CIDN:

1729 0300001

SURVEY OF BUILDING ENVELOPE FAILURES IN WOOD FRAME BUILDINGS IN THE COASTAL CLIMATE AREA OF BRITISH COLUMBIA

Objective:

Produce a study of the causes, and contributory factors resulting in the decay and deterioration of 3 & 4 storey wood frame residential buildings in the coastal climate area of British Columbia.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research Division

Contractor:

Morrison Hershfield Ltd.
#247-4229 Canada Way
Burnaby, British Columbia
V5G 1H3

CIDN:

1569 0300001

HOUSE CONSTRUCTION HABITATIONS -- CONSTRUCTION

Ongoing Projects/Projets en cours

URBAN SELF-BUILD DEMONSTRATION

Objective:

To determine the viability of the self-build housing assistance option in an urban setting.

CMHC Project Officer:

D.A. Stewart

Division:

Policy and Research Sector

Contractor:

The Nova Scotia Department of
Housing & Consumer Affairs
40 Alderney Drive
5th Floor
P.O. Box 815
Dartmouth, Nova Scotia
B2Y 3Z3

CIDN:

1011 0600001

HOUSING /LOGEMENT

Ongoing Projects/Projets en cours

CANADIAN TEST OF SURVEY INSTRUMENTS AND INDICATORS OF QUALITY OF LIFE, HEALTH & WELL-BEING IN VARIOUS HOUSING ENVIRONMENTS

Objective:

To develop indicators and survey instruments which will be used to assess quality of life in housing environments; to measure the impact on households of housing-based interventions and programs; to provide a standard set of instruments to assess and monitor the health and quality of life experienced by individuals and families; to better understand the contribution of housing and living environments to the quality of life experienced by individuals and families.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and
Research
Centre for Future Studies in
Housing and Living
Environments

Contractor:

University of Winnipeg
Institute of Urban Studies
346 Portage Avenue
Winnipeg, Manitoba
R3C 0C3

CIDN:

1516 0200001

LES ENSEMBLES RÉSIDENTIELS ET LA SÉCURITÉ ROUTIÈRE

Objet :

Inventorier les principes
d'aménagement des milieux
résidentiels proposés dans le but
d'assurer la sécurité des
différents usagers de la route et
la qualité de vie des habitants.

Agent de projet de la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

Denise Piché
Université Laval
École d'architecture
Québec (Québec)
G1K 7P4

NIC :

0925 0200001

**ENVIRONMENTAL AND
MARKETING SCAN RE:
YOUTH, HOUSING AND
COMMUNITY:
INNOVATIONS AND BEST
PRACTICES**

Objective:

To review the current (and recent past) state of youth housing related issues in Canada and prepare a report.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research

Contractor:

Luba Serge
29, rue Easton
Montreal, Quebec
H4X 1K9

CIDN:

0835 0303001

**FEASIBILITY STUDY FOR A
SURVEY OF CONSUMER
INTENTIONS TO BUY OR
RENOVATE**

Objective:

Undertake and complete a feasibility study for a survey of consumer intentions to buy or renovate.

CMHC Project Officer:

G. Goy

Division:

Market Analysis Centre

Contractor:

Prairie Research Associates Inc.
300-326 Broadway
Winnipeg, Manitoba
R3C 0S5

CIDN:

1587 1000001

**THE FUTURE OF THE
INTERNET AND THE
HOUSING SECTOR**

Objective:

Undertake a review of current housing and community planning applications on the Internet and explore the potential implications of various scenarios on the future of the Internet for the community planning sector.

CMHC Project Officer:

B. Sanscartier

Division:

Social and Economic Policy and Research
Centre for Future Studies in Housing and Living Environments

Contractor:

Syllable Internet Expressions Inc.
5466 Hutchison
Montréal, Quebec
H2V 4B3

CIDN:

1619 0200001

**1996 TRI-COUNTRY
CONFERENCE**

Objective:

Assist in bringing housing experts and practitioners together to exchange information and engage in discussions and workshops on key housing issues common to Canada, the Kingdom and the United States.

CMHC Project Officer:

J. Angus

Division:

Social and Economic Policy and Research

Contractor:

Canadian Housing & Renewal Association
251 Laurier Avenue West
Suite 304
Ottawa, Ontario
K1P 5J6

CIDN:

1593 0200001

HOUSING AFFORDABILITY LOGEMENT ABORDABLE

Completed Reports/Rapports terminés

L'ABORDABILITÉ DU LOGEMENT DANS UNE SOCIÉTÉ EN ÉVOLUTION : ACTES DU SYMPOSIUM, OTTAWA, ONTARIO, LE 2 NOVEMBRE 1995.

Ottawa : Société canadienne d'hypothèques et de logement, 1996.

La Société canadienne d'hypothèques et de logement (SCHL) a parrainé un symposium d'un jour sur l'Abordabilité du logement dans une société en évolution afin de susciter une prise de conscience et encourager la discussion relativement à certaines questions concernant l'abordabilité du logement et d'élaborer un plan de recherche sur ces questions. La SCHL avait commandé trois documents d'information qui ont été présentés et discutés au cours du symposium :

- ° Tendances futures du logement
- ° Loger une société diverse
- ° Mesurer les effets des règlements municipaux sur le prix des logements et les loyers.

Après chaque exposé, un panel de cinq spécialistes a fait part de ses réactions, puis il y a eu discussion générale entre tous les participants. La dernière partie du symposium a été consacrée à un débat ouvert sur les «Prochaines étapes : Plan de recherche et autres initiatives de suivi». Cette publication résume chacun des exposés au symposium ainsi que les discussions ouvertes.

NOTE: Also available in English under the title: *Housing Affordability in a Changing Society: Symposium Proceedings, Ottawa, Ontario, November 2, 1995.*

HOUSING AFFORDABILITY IN A CHANGING SOCIETY: SYMPOSIUM PROCEEDINGS, OTTAWA, ONTARIO, NOVEMBER 2, 1995.

Ottawa: Canada Mortgage and Housing Corporation, 1996.

Canada Mortgage and Housing Corporation (CMHC) sponsored a one-day symposium on **Housing Affordability in a Changing Society** in order to raise awareness and facilitate discussion on select issues regarding housing affordability and to develop a research plan in response to these issues. CMHC commissioned three background papers to be presented and discussed at the symposium:

- ° Future Trends in Housing
- ° Housing a Diverse Society
- ° Measuring the Effects of Municipal Regulations on House Prices and Rents.

Each presentation was followed by responses from five panelists and then opened to general discussion among all participants. The final part of the symposium was an open discussion on "Next Steps: Research Plan and Other Follow-up Action". This publication summarizes each of the presentations at the symposium as well as the open discussions.

NOTE : Aussi disponible en français sous le titre : *L'Abordabilité du logement dans une société en évolution : actes du symposium, Ottawa, Ontario, le 2 novembre 1995.*

Ongoing Projects/Projets en cours

CONVERSION OF NON-RESIDENTIAL SPACE TO AFFORDABLE HOUSING

Objective:

To develop user friendly building assessment tools that assist developers to determine the feasibility of conducting cost-effective conversions of non-residential space with minimal cash outlays.

CMHC Project Officer:

D. D'Amour

Division:

Social and Economic Policy and Research

Contractor:

Gibbons Hampton Architects
Limited
Woodgate Building
66 Kenmount Road
Suite 306
St. John's, Newfoundland
A1B 3V6

CIDN:

1599 0200001

THE CUMULATIVE EFFECT OF LEVIES, FEES, AND TAXES AND TRANSACTION COSTS ON HOUSING AFFORDABILITY

Objective:

Produce an information report, designed to raise awareness about the cumulative effect of levies, development charges, fees, taxes and transaction costs on housing prices and affordability.

CMHC Project Officer:

D. Scherlowski

Division:

Social and Economic Policy and Research

Contractor:

Greg Lampert Economic
Consultants
51 Maybourne Avenue
Scarborough, Ontario
M1L 2W1

CIDN:

1671 0200001

DOWNPAYMENT AFFORDABILITY MEASURE RESEARCH

Objective:

Investigate the downpayment affordability situation in Canada and determine the feasibility of developing a measure of downpayment affordability.

CMHC Project Officer:

D. Dallaire

Division:

Market Analysis Centre

Contractor:

Focus Consulting
40 Java Street
Ottawa, Ontario
K1Y 3L3

CIDN:

1581 1000001

HOUSING AFFORDABILITY LOGEMENT ABORDABLE

Ongoing Projects/Projets en cours

EVALUATION OF AFFORDABILITY AND CHOICE (A.C.T.) PROGRAM

Objective:

Review the analysis plan and questionnaires drafted by CMHC and recommend improvement if needed; pretest the draft questionnaire and recommend improvement if needed.

CMHC Project Officer:

G. Murray

Division:

Program Evaluation Division

Contractor:

ABT Associates of Canada
112 Kent Street, Suite 2010A
Place de Ville, Tower "B"
Ottawa, Ontario
K1P 5P2

CIDN:

1630 0500001

AN IMPROVED MEASURE OF AFFORDABILITY FOR ESTIMATING HOUSING NEEDS

Objective:

Examine the relevance of the fixed 30% shelter cost-to-income ratio for measuring housing affordability in light of the level of actual shelter expenditures compared to incomes and second, examine the potential for an alternative variable shelter cost-to-income measure of affordability which would be more sensitive to differing households.

CMHC Project Officer:

J. Engeland

Division:

Social and Economic Policy
and Research

Contractor:

Clayton Research Associates
Limited
1580 Kingston Road
Scarborough, Ontario
M1N 1S2

CIDN:

1568 0200001

MARKET ANALYSIS HOUSING AFFORDABILITY SOFTWARE PROJECT

Objective:

To produce a software program that will assist homebuyers and/or the real estate and housing industry in understanding affordability and the mortgage options available to consumers in a friendly, comprehensive and well-documented manner.

CMHC Project Officer:

D. Dall-Leblanc

Division:

Market Analysis Centre

Contractor:

AIM Technical Services
512-130 Albert Street
Ottawa, Ontario
K1P 5G4

CIDN:

1536 1000001

SHELTER AFFORDABILITY AND HOUSING NEEDS OF CANADIAN FOOD BANK CLIENTS

Objective:

To encourage an exchange of information on the substantive aspects of the project, Shelter Affordability and Housing Needs of Canadian Food Bank Clients.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Jeff A. Sloan
Associate Professor
University of Manitoba
Nursing Research Institute
Faculty of Nursing
Winnipeg, Manitoba
R3T 2N2

CIDN:

1099 0200001

**SUMMARY REPORT ON
MUNICIPAL REGULATORY
MECHANISMS TO
FACILITATE THE
PRODUCTION OF
AFFORDABLE HOUSING**

Objective:

To undertake a background paper and presentation that will describe the use of regulatory mechanisms by municipalities to facilitate the production of affordable housing without the use of public funds.

CMHC Project Officer:

D. Scherlowski

Division:

Social and Economic Policy and Research

Contractor:

Richard Drdla Associates
415 Wellesley Street East
Toronto, Ontario
M4X 1H5

CIDN:

1670 0200001

**SYNTHESIS AND
COMMUNICATIONS OF ACT
INITIATIVES**

Objective:

To carry out an analysis of completed ACT initiatives with the objective of developing information on those initiatives that have significant potential to improve housing affordability, or extend the range of housing choices.

CMHC Project Officer:

B. Gray

Division:

Social and Economic Policy and Research

Contractor:

Mount Allison University
Dept. of Geography
Sackville, New Brunswick
E0A 3C0

CIDN:

1571 0200001

**HOUSING AND IMMIGRATION
LOGEMENT ET IMMIGRATION**

Ongoing Projects/Projets en cours

**A COMPARATIVE STUDY OF
IMMIGRANT HOUSING IN
MONTREAL AND TORONTO**

Objective:

To examine differences in housing conditions (tenure, dwelling type, cost) between visible minority immigrant groups living in Montreal and Toronto.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Brian K. Ray
McGill University
School of Architecture
815 Sherbrooke Street West
Montreal, Quebec
H3A 2K6

CIDN:

1283 0200001

HOUSING DESIGN ARCHITECTURE RESIDENTIELLE

Ongoing Projects/Projets en cours

APPLICATION OF VIRTUAL REALITY TO THE FLEX HOUSING DESIGN COMPETITION, STAGE 1: FEASIBILITY ANALYSIS

Objective:

Explore and evaluate whether computer technology can be a cost-effective and useful tool to evaluate, test, modify and demonstrate housing design submitted to the Flex Housing Design Competition.

CMHC Project Officer:

T. Green

Division:

Social and Economic Policy and Research
Centre for Future Studies in Housing and Living Environments

Contractor:

Barry Pendergast Architect Ltd.
9203-29th Street South West
Calgary, Alberta
T2V 4V1

CIDN:

1586 0200001

FEASIBILITY OF DISABILITY-INTEGRATED, UNIVERSALLY DESIGNED INFILL CO-HOUSING IN AN URBAN SETTING

Objective:

To create a document which includes: A model of typical infill co-housing based on current literature and post-occupancy evaluation of existing co-housing developments and their residents.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

David Wetherow
Executive Director
Association for Community Living
1706-90 Garry Street
Winnipeg, Manitoba
R3C 4J4

CIDN:

1101 0200001

FLEX HOUSING DESIGN COMPETITION

Objective:

To develop the contractor's Stage 1 winning design of the Horizontal multiple dwelling to an advanced stage of completion so that it more adequately meets the Flex Housing Design Competition criteria.

CMHC Project Officer:

T. Parker

Division:

Technical Policy and Research Division

Contractors:

Ron Wickman
Finalta Designs Inc.
4307-116 Street
Edmonton, Alberta
T6J 1S1

Stéphane Hazan
Architectes
5509 Borden Avenue
Côte St.-Luc, Quebec
H4V 2T5

Nouvelle Development Corporation
48 Cliftonvale Avenue
London, Ontario
N6J 1J8

Karwood Estates Inc. & Gregg Construction Ltd.
200 Hussey Drive
St. John's, Newfoundland
A1A 4Y6

CIDN:

1389 0200004
1389 0200008
1389 0200009
1389 0200010

FLEX HOUSING DESIGN COMPETITION

Objective:

To develop the contractor's Stage 1 winning design of the Low-Rise dwelling to an advanced stage of completion so that it more adequately meets the Flex Housing Design Competition Criteria.

CMHC Project Officer:

T. Parker

Division:

Technical Policy and Research Division

Contractor:

Innovative Housing Society
201-1646 West 7th Avenue
Vancouver, British Columbia
V6J 1S5

CIDN:

1389 0200005

FLEX HOUSING DESIGN COMPETITION

Objective:

To develop the contractor's Stage 1 winning design of the single-detached dwelling to an advanced stage of completion.

CMHC Project Officer:

T. Parker

Division:

Technical Policy and Research
Division

Contractors:

McGill University
School of Architecture
815 Sherbrooke Street West
Montreal, Quebec
H3A 2K6

The Design Workshop
R.R.#1
Corbyville, Ontario
K0K 1V0

Radiant Homes
Site 25
R.R.#6
Armdale, Nova Scotia
B3L 4P4

Ron Wickman
Finalta Designs Inc.
4307-116 Street
Edmonton, Alberta
T6J 1S1

CIDN:

1389 0200003
1389 0200006
1389 0200007
1389 0200011

HABITATION ET FLEXIBILITÉ AU CANADA: BILAN 1991

Objet :

Construire une grille d'analyse permettant de dresser une typologie des solutions apportées par les architectes; et faire un rapport de synthèse proposant un bilan global des perspectives de résolution du problème de flexibilité dans un projet d'habitation.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

Annie Chelin
5780, rue Hutchison
Outremont (Québec)
H2Y 4B6

NIC :

0911 0200001

HABITATIONS NOUVELLES EN MILIEU ANCIEN

Objet :

La recherche porte sur les problèmes de design que posent l'implantation et l'intégration de nouvelles habitations dans les milieux résidentiels canadiens de facture plus ou moins homogène ou dans leurs zones limitrophes. Par extension, elle s'intéresse à toute opération de construction nouvelle en milieu ancien, qu'il s'agisse de recyclages, de

rénovations ou
d'agrandissements.

Agent de projet pour la SCHL :

M. Desbiens

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

Pierre-Richard Bisson
Université de Montréal
Case Postale 6128
Succursale Centre-ville
Montréal (Québec)
H3C 3J7

NIC :

1450 0200001

HOUSING DESIGN ARCHITECTURE RESIDENTIELLE

Ongoing Projects/Projets en cours

LE LOGEMENT CONTIGU REPENSÉ DANS SES ÉLÉMENTS

Objet :

Ce projet de recherche porte sur l'analyse des composantes, éléments structurants de base, du logement dit "contigu".

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

Richard de la Riva
Affleck, de la Riva architecture
1030 St.-Alexandre
Bureau 410
Montréal (Québec)
H2Z 1P3

NIC :

1645 0200001

MONTREAL : UNE GRANDE TRADITION D'HABITAT À DENSITÉ MOYENNE

Objet :

Ce projet veut mettre en lumière les processus d'adaptation du logement et des types de bâtiments à travers les diverses phases de l'évolution des formules "plex" (duplex, triplex, quatre-plex, comq-plex...) à Montréal au cours de quatre cycles de constructions entre 1866 et 1935.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

David B. Hanna
Université du Québec à
Montréal
Case postale 8888
Succursale Centre-Ville
Montréal (Québec)
H3C 3P6

NIC :

1455 0200001

PASSIVE SOLAR HOUSE DESIGNS FOR CANADA

Objective:

To identify relevant literature and design tools, analyze and interpret data in order to update the existing CMHC publication on passive solar house designs.

CMHC Project Officer:

F. Grammenos

Division:

Technical Policy and Research
Division

Contractor:

Leslie Jones & Associates Ltd.
319 Catherine Street
Ottawa, Ontario
K1R 5T4

CIDN:

1241 0200001

VILLE ST-LAURENT REVISITED: WARTIME HOUSING AND ARCHITECTURAL CHANGE, 1942-92

Objective:

To study the architectural modifications made to 25 houses in Ville St. Laurent, Quebec, constructed as temporary accommodation for workers during World War II and to analyze the specific design intentions of the program.

CMHC Project Officer :

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Dr. Annmarie Adams
McGill University
815 Sherbrooke Street West
Montreal, Quebec
H3A 2K6

CIDN:

1083 0200001

HOUSING EXPORT OPPORTUNITIES DÉBOUCHÉS EXTÉRIEURS POUR LE SECTEUR DE L'HABITATION

Ongoing Projects/Projets en cours

CMHC PRESENTATION TO KOBE INTERHOME '96, JAPAN: PROMOTING CANADA'S HOUSING INDUSTRY

Objective:

To develop the text for CMHC's presentation at the Kobe Interhome '96, in Japan, as part of that event's lecture series.

CMHC Project Officer:

P. Burr

Division:

International Relations Division

Contractor:

David Graham
901-1575 Beach Avenue
Vancouver, British Columbia
V6G 1Y5

CIDN:

1738 0900001

CANADIAN HOUSING FEASIBILITY STUDY FOR GERMANY

Objective:

Carry out a feasibility study and develop a proposal for a Canadian presentation to the German Government for a Canadian housing certificate program to more easily allow the export to Germany of Canadian housing systems, products and services.

CMHC Project Officer:

C. McCallum

Division:

International Relations Division

Contractor:

Otto & Erskine Architects Inc.
30 Rosemount Avenue
Suite 200
Ottawa, Ontario
K1Y 1P4

CIDN:

1712 0900001

CANADIAN/JAPANESE CONSTRUCTION COST ANALYSIS OF A TYPICAL 2X4 FRAMED HOUSE PLAN

Objective:

Develop a costing spreadsheet tool for use on all soft and hard costs forming part of the delivered turn key project including at minimum, design; permits; and approvals; materials; etc.

CMHC Project Officer:

P. Burr

Division:

International Relations Division

Contractor:

Export Council of Canadian
Architecture
901-1575 Beach Avenue
Vancouver, British Columbia
V6G 1Y5

CIDN:

1596 0900001

GUIDE TO DOCUMENTING HOUSING EXPORT PROJECTS FOR FINANCING PURPOSES

Objective:

Develop a guide for novice housing exporters that will help them to develop an export business plan for their projects.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

VSES Consultants
Victor Spassov Editorial Services
Ltd.
707 Fraser Avenue
Ottawa, Ontario
K2A 2S1

CIDN:

1727 0900001

GUIDE TO DOING HOUSING-RELATED BUSINESS WITH INTERNATIONAL FINANCIAL INSTITUTIONS

Objective:

To develop a guide that will help Canadian housing exporters to screen initial commercial inquiries from potential foreign customers.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

VSES Consultants
Victor Spassov Editorial Services
Ltd.
707 Fraser Avenue
Ottawa, Ontario
K2A 2S1

CIDN:

1731 0900001

HOUSING EXPORT OPPORTUNITIES DÉBOUCHÉS EXTÉRIEURS POUR LE SECTEUR DE L'HABITATION

Ongoing Projects/Projets en cours

GUIDE TO SELECTING A START-UP HOUSING EXPORT MARKET

Objective:

To develop a guide for novice housing exporters or the existing housing exporter that will assist them when deciding where to begin exporting or where to export next.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

The Bayswater Consulting Group
82 Bayswater Avenue
Ottawa, Ontario
K1Y 2E9

CIDN:

1732 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN CENTRAL AND EASTERN EUROPE

Objective:

To identify, measure, analyse and evaluate housing export opportunities for Canadians in Central and Eastern Europe.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

The Canadian Urban Institute
30 St. Patrick Street
6th Floor
Toronto, Ontario
M5T 3A3

CIDN:

1580 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN LATIN AMERICA

Objective:

To prepare a study to give depth to the sparse information and analysis that currently is available about Latin American housing markets and market opportunities as well as Canada's capacity to address these opportunities.

CMHC Project Officer:

L. Marti-Aguilar

Division:

International Relations Division

Contractor:

Holmen Enterprises Limited
8449-118 Street
Edmonton, Alberta
T6G 1T2

CIDN:

1563 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN MAINLAND ASIA AND THE PACIFIC RIM

Objective:

To carry out research on mainland Asia (excluding China) which will identify, measure, analyse and evaluate housing export opportunities for Canadians.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

Hickling Corporation
350 Sparks Street
6th Floor
Ottawa, Ontario
K1R 7S8

CIDN:

1565 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN THE MIDDLE EAST

Objective:

Carry out a study to identify, measure, analyse and evaluate housing export opportunities for Canadians in the Middle East.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

Nordicity Group Ltd.
280 Albert Street
10th Floor
Ottawa, Ontario
K1P 5G8

CIDN:

1608 0900001

**HOUSING EXPORT
OPPORTUNITIES FOR
CANADIANS IN WESTERN
EUROPE**

Objective:

To identify, measure, analyse and evaluate housing export opportunities for Canadians in Western Europe.

CMHC Project Officer:

C. McCallum

Division:

International Relations Division

Contractor:

Trema Gestion Conseil Inc.
10160 avenue St-Charles
Montreal, Quebec
H2C 2L4

CIDN:

1564 0900001

**HOUSING EXPORT
OPPORTUNITIES IN THE U.S.
FOR CANADA'S HOUSING
INDUSTRY**

Objective:

To identify, measure, analyse and evaluate housing export opportunities for Canadians in the United States.

CMHC Project Officer:

P. Spurr

Division:

International Relations Division

Contractor:

Centre for International Business
Studies
École des hautes études
commerciales
5255 Decelles Avenue
Montreal, Quebec
H3T 1V6

CIDN:

1504 0901001

**HOUSING EXPORTER GUIDES
3-5 (NEW EXPORTER SERIES)**

Objective:

Develop three guides for Canada's housing exporters.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

Perwit International
505 Westminster Avenue
Ottawa, Ontario
K2A 2T9

CIDN:

1710 0900002

**SCREENING GUIDE FOR
CANADA'S HOUSING
EXPORTERS**

Objective:

Develop a guide that will help Canadian housing exporters to undertake projects financed by international financial institutions.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

VSES Consultants
Victor Spassov Editorial Services
Ltd.
707 Fraser Avenue
Ottawa, Ontario
K2A 2S1

CIDN:

1726 0900001

HOUSING FORECASTING AND DEMAND PRÉVISION ET DEMANDE DE LOGEMENTS

Completed Reports/Rapports terminés

GENDER DIFFERENCES IN HOUSING DEMAND.

Prepared by Andrejs Skaburskis. Ottawa: Canada Mortgage and Housing Corporation, 1996. (External Research Program)

This study assesses the effects of reducing the income disparity between men and women on aggregate housing demand in Toronto and Vancouver. It shows that an increase in women's income prospects reduces family formation and fertility rates in ways that can have a major impact on housing demand. The demand for single-family detached houses and for rental accommodation will decline with increases in women's income should immigration or migration not compensate for the shift. The demand for condominiums will increase by a large amount. Without migration and immigration urban populations will not be able to maintain themselves should the trend toward income and career equality continue. The rate of decline in population and household size increases as income disparities are reduced.

Ongoing Projects/Projets en cours

ÉVOLUTION DE LA DEMANDE DE LOGEMENT ET STABILITÉ DES PRIX IMPLICITES DES ATTRIBUTS RÉSIDENTIELS : UNE COMPARAISON 1986-1991

Objet :

Dresser pour 1991-92 la carte des préférences des ménages de la région de Québec en matière résidentielle; mesurer l'ampleur et la direction des modifications dans la demande de logement au cours de cette période à l'aide des

changements dans les prix implicites des caractéristiques, et ce pour un ensemble de sous-marchés qui restent à déterminer.

Agent de projet pour la SCHL :

M. Macpherson

Division:

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

François DesRosiers
Université Laval
Cité universitaire
Québec (Québec)
G1K 7P4

NIC :

1275 0200001

SEVEN SOURCES OF CHANGE IN VANCOUVER HOUSING PRICES, 1981-1992.

Prepared by Eric J. Heikkila and Stan W. Hamilton. Ottawa: Canada Mortgage and Housing Corporation, 1996. (External Research Program)

The objective of this research is to gain fundamental empirical insights into the sources of change in residential property values in the metropolitan Vancouver area through a detailed analysis and comparison of 1981 and 1991 census and real estate data. Using the methodology outlined below, 1981-1991 price changes are decomposed into seven distinct components: (i) demand due to population growth, (ii) changing preferences for housing attributes, (iii) changing preferences for neighbourhood characteristics, (iv) changes in the accessibility gradient, (v) market valuation of changes to housing attributes, (vi) market valuation of changes in neighbourhood profiles, and (vii) market valuation of changes in accessibility.

The methodology employed is purposely patterned after a similar study conducted in Los Angeles. The comparability of data and methods enables the consultants to make direct benchmark comparisons with changes in residential real estate markets elsewhere. In both cases the statistical model was highly significant, a fact that underlines the general utility of this approach. However, the findings for Vancouver differ in many ways from the Los Angeles case, thereby lending further empirical evidence in support of those who argue that the Canadian urban experience is fundamentally different from that of the U.S. The empirical results also support the general contention that accessibility to the central business district continues to be valued highly in Vancouver, unlike the Los Angeles case.

The study accomplished its main aim of decomposing changes in residential prices in Vancouver into seven distinct sources of change. As in the case of Los Angeles, it found that a pure demand shift was absolutely dominant among these effects. This is not surprising in light of the real estate booms that visited each city during the 1980s. However, unlike Los Angeles, the net contribution of the other six factors was positive in Vancouver, whereas in Los Angeles prices would have fallen were it not for the pure demand shift attributable to population inflow. This may suggest that the changes affecting Vancouver over the past decade are on the whole of a more positive nature, with six of seven sources contributing to an increase in residential land values.

HOUSING MARKET MARCHÉ DE L'HABITATION

Ongoing Projects/Projets en cours

MATCHING BUYERS AND SELLERS IN THE RESALE HOUSING MARKET

Objective:

To encourage an exchange of information on the substantive aspects of the project, Matching Buyers and Sellers in the Resale Housing Market.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Christopher T. Ragan
Assistant Professor
McGill University
Department of Economics
855 Sherbrooke Street West
Montreal, Quebec
H3A 2T7

CIDN:

1098 0200001

HOUSING SAFETY SECURITÉ À DOMICILE

Ongoing Projects/Projets en cours

SAFETY AUDIT KIT AND DEMONSTRATION RESEARCH PROJECT

Objective:

To develop and process for delivery the safety audit kit demonstration research project.

CMHC Project Officer:

B. Baxter

Division:

Social and Economic Policy and
Research

Contractor:

Mount Allison University
Rural and Small Town
Programme
Sackville, New Brunswick
E0A 3C0

CIDN:

1545 0100001

**SÉCURITÉ URBAINE,
PRÉVENTION DE LA
CRIMINALITÉ ET
INTERVENTIONS EN
HABITATION DANS LES
QUARTIERS MONTRÉALAIS**

Objet :

La présente a pour but de vous confirmer l'engagement de la SCHL à financer un projet de la SHDM intitulé Sécurité urbaine, prévention de la criminalité et interventions en habitation dans les quartiers montréalais.

Agent de projet pour la SCHL :
B. Baxter

Division :
Politiques et recherche sociales
et économiques

Contractant :
Société d'habitation du Québec
Direction générale de la
planification et de la recherche
1054 rue Conroy
Québec (Québec)
G1R 5E7

NIC :
1411 0100001

INFRASTRUCTURE

Ongoing Projects/Projets en cours

**MUNICIPAL SERVICES AND
FINANCING AND PRICING
POLICIES, MAINTENANCE
AND REHABILITATION
PRACTICES, AND THE
CONDITION OF THE
INFRASTRUCTURE**

Objective:

To carry out a study on the link between organizational structure for the delivery of municipal services and financing and pricing policies, maintenance and rehabilitation practices and the condition of the infrastructure.

CMHC Project Officer:
S. Jacques

Division:
Social and Economic Policy and
Research

Contractor:
University of Winnipeg
Institute of Urban Studies
346 Portage Avenue
Winnipeg, Manitoba
R3C 0C3

CIDN:
1528 0200001

Completed Reports/Rapports terminés

LIVING WITH REVITALIZATION.

Prepared by Malcolm Holt, HSP Humanité Services Planning (B.C.) Ltd. Ottawa: CMHC, 1993, i.e., 1996. (External Research Program).

This study builds on previous research that examines the social and geographical impacts of revitalization on Vancouver's West Side. It focuses on the three Kitsilano neighbourhoods of Kitsilano-Point Grey, Kitsilano-Bayview and Central Kitsilano and documents the changes to the local area while exploring the perceived costs and benefits of staying in a revitalizing neighbourhood assumed by local residents.

Over the last four decades, the changes in social profile and to the built environment of Kitsilano have been considerable. The neighbourhood initially developed as a middle-income family area characterized by a single-detached home residential landscape. From 1961 to 1986, the social profile of the neighbourhood and its physical landscape changed with family household's replaced by non-family households made up of mid-life adults and an associated increase in multiple rented dwellings. Between 1986 and 1991, this general trend changed, however, with the addition of mid to late life adults to the community and the development of condominiums for owner-occupiers.

Residents' overall views of the recent changes in their neighbourhoods differ on the basis of their housing tenure. For some renters the revitalization of Kitsilano resulted in negative changes in their housing conditions and this in turn influenced their overall views of the neighbourhood's development. Almost half of the renters surveyed indicated that it was likely they would move in the next two years.

By contrast, most owners view the changes to the neighbourhood in a more positive light. The security of home ownership, allied with the desirability of Kitsilano as a residential location were emphasized. These different views of changes in the area further suggested some measure of distrust between renters and owners. Despite this, both groups remained attached to Kitsilano as a place to live, although more so for owners than renters.

LEAD/PLOMB

Completed Reports/Rapports terminés

RESIDENTIAL SOURCES OF LEAD.

Prepared by Metro Health Services Inc. Principal consultant: Richard E. Schott. Prepared for Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.

Five hundred homes were selected in Saint John, New Brunswick to evaluate the relationship between lead in blood and lead in drinking water. From this sample, one hundred homes were selected to examine the additional contribution of lead from food, soil, dust, and paint to the blood lead levels of residents. Fifty homes were selected where residents were known to have raised blood lead levels, and 50 further homes were selected where residents were known to have low blood lead levels. All 100 homes were visited and one food, two soil, and three dust samples were taken. Multiple measurements of lead in paint were performed using in situ, non-destructive X-ray fluorescence analysis. A statistical model was developed to explain the data. The primary predictors of raised blood lead levels in the residents were found to be resident age, household water lead level, and lead in paint. The primary residential source was confirmed to be lead in household water.

NOTE : Aussi disponible en français sous le titre : *Sources de plomb dans les habitations.*

SOURCES DE PLOMB DANS LES HABITATIONS.

Préparé par Metro Health Services Inc. Consultant principal : Richard E. Schott. Préparé pour la Division de la recherche, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1995.

Cinq cents maisons ont été sélectionnées à Saint John, au Nouveau-Brunswick, dans le but d'évaluer la relation entre la plombémie et la présence de plomb dans l'eau potable. De cet échantillon, cent maisons ont été choisies afin d'examiner dans quelle mesure d'autres sources de plomb comme les aliments, le sol, la poussière et la peinture modifiaient la plombémie des occupants. Parmi ces maisons, 50 étaient occupées par des gens chez qui on savait que la plombémie était élevée et les 50 autres étaient occupées par des gens dont la plombémie était faible. Dans chacune des 100 maisons, on a prélevé un échantillon d'aliment, deux échantillons de sol et trois échantillons de poussière. De plus, de multiples mesures du plomb dans la peinture ont été prises à l'aide d'une méthode d'analyse in situ non destructrice, la fluorescence à rayons X. Un modèle statistique a été mis au point pour expliquer les données. Les principaux indicateurs prévisionnels d'une élévation de la plombémie chez les occupants se sont avérés être l'âge des occupants, la concentration de plomb dans l'eau consommée dans la maison et la présence de plomb dans la peinture. La principale source de plomb à la maison s'est avérée être le plomb présent dans l'eau domestique.

NOTE: Also available in English under the title: *Residential Sources of Lead.*

LIGHTING/ÉCLAIRAGE

Completed Reports/Rapports terminés

LIGHTING AND HUMAN HEALTH: A REVIEW OF THE LITERATURE.

Prepared by B. Rusak, G.A. Eskes and S.R. Shaw. Prepared for Technical Policy and Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996.

The goal of this literature review is to summarize current knowledge of the physiological and behavioural effects of light on people and on human health. The context of this review is the desire to assess the implications of our knowledge in this area for practices relating to the illumination of homes through windows. The literature review is divided into five major sections. Each subsection is preceded by a short synopsis (in bold type) which summarizes the main points of that section in non-technical language.

Section I, **Light & Lighting**, describes the physical characteristics of light reaching the earth from the sun and reaching the tissues of the human body. Issues discussed include the nature of the spectrum of electromagnetic energy we call light, the physical properties of light from different sources, the effects of glass acting as a light filter, and appropriate methods for measuring light intensity and spectral properties.

Section II, **The Human Visual System**, describes the anatomy of the human eye, the light filtering properties of the eye media, and the nature of the retinal photoreceptors. This is followed by a review of the nature of colour vision and the physiological mechanisms which are responsible for our perceptions of colour. The central neural mechanisms underlying vision and the mechanisms that code for brightness and contrast sensitivity are also addressed.

Section III examines the effects of light on physiological processes. These include both toxic and beneficial extraretinal effects of exposure to light of different wavelengths, as well as retinally mediated effects on circadian rhythms, pineal gland function and aspects of autonomic arousal.

Section IV deals with the effects of light on mental health. The major subject reviewed is the use of light in the treatment of seasonal affective disorder (SAD) and possible mechanisms underlying its efficacy. In addition, the possible effects of light on mood in forms of non-seasonal depression and on sleep disorders are reviewed.

The final section, **Illumination in Home and Workplace**, examines attitudes toward windows and windowless environments, effects of window tinting, the influence of room colour and full-spectrum lighting sources on mood and health, and the interaction of aging with characteristics of illumination sources.

MANUFACTURED HOUSING/HABITATIONS USINÉES

AN OPTIMUM VALUE ENGINEERING (OVE) STUDY OF THE CANADIAN MANUFACTURED HOUSING INDUSTRY

Objective:

Prepare an industry analysis and a series of engineering reports compiled into a final report which will present detailed and tangible findings and recommendations to achieve optimum value from the manufacturing process.

CMHC Project Officer:

J. Robar

Division:

Technical Policy and Research
Division

Contractor:

Canadian Manufactured Housing
Institute
150 Laurier Avenue West
Suite 200
Ottawa, Ontario
K1P 5J4

CIDN:

1597 0200001

RORO - MODULAR HOME SHIPPING SYSTEM

Objective:

Develop a building module transportation system which, cost effectively, utilizes the untapped capacity of Japanese car and transport ships as they return empty to their home ports.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Ian Bazley
Architect
32 Bello Road
Kelowna, British Columbia
V1V 1C1

CIDN:

1646 0200001

MOISTURE PROBLEMS/HUMIDITÉ

Ongoing Projects/Projets en cours

EIFS RAINSCREEN PRODUCT SYSTEM

Objective:

To test the performance of a new Exterior Insulation and Finish system with a pressure equalized rain screen.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
Housing Technology Incentives
Program

Contractor:

STO Industries Canada Inc.
3495 Laird Road
Unit 16-18
Mississauga, Ontario
L5L 5S5

CIDN:

1268 0200001

Ongoing Projects/Projets en cours

ICE DAMMING DATA ANALYSIS

Objective:

Analyse all the data collected in the previous project "Ice Damming Field Research" and provide a report on the findings.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research Division

Contractor:

Scanada Consultants Limited
446 Reynolds Street
Oakville, Ontario
L6J 3M4

CIDN:

1662 0300004

PERFORMANCE EVALUATION OF WATER REPELLENTS FOR ABOVE GRADE MASONRY

Objective:

Evaluate the performance of various water repellents on a comparative basis and develop practical methods to evaluate their effectiveness.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Dominic Chiovitti
1320, Boulevard Lionel Boulet
Varennnes, Quebec
J3X 1P8

CIDN:

1634 0200001

STRAW BALE MOISTURE SENSOR STUDY

Objective:

To develop and test inexpensive moisture sensors that could be used by owners of straw bale houses for monitoring of moisture conditions inside straw walls.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research Division

Contractor:

Instruscience Ltd.
65 Bentley
#15
Ottawa, Ontario
K2E 8B4

CIDN:

1720 0800001

MORTGAGES AND HOUSING FINANCE HYPOTHÈQUES ET LOGEMENT -- FINANCES

Completed Reports/Rapports terminés

FEASIBILITY STUDY ON A METHODOLOGY FOR MEASURING DISCRIMINATION IN RESIDENTIAL MORTGAGE LENDING.

Prepared by Prairie Research Associates Inc. Prepared for Strategic Planning and Policy Development Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.

Mortgage discrimination has been at the centre of housing policy research in the United States for the past two decades. Despite increasing levels of regulation to eliminate this practice, a furious debate remains over whether it exists at all. Increasingly sophisticated research has produced ambiguous results. There is no evidence to suggest that mortgage market discrimination is a problem in Canada. However, because it exists in many other areas of society, there is no reason to assume that the mortgage lending process is immune.

Because discrimination may potentially eliminate otherwise credit-worthy borrowers, standard economic theory argues that profit-maximizing lenders will not discriminate.

Discrimination may, however, result from lack of experience or understanding of certain groups of borrowers. For example, lenders who are conservative in the face of uncertainty may discriminate inadvertently. In other cases, lenders may be willing to forego profit if discrimination is practiced for personal, cultural, or social reasons.

This paper examines the concept of discrimination in residential mortgage lending, reviews and evaluates the approaches that have been developed to detect the existence of discrimination in the US, and presents a possible research program suitable for lending firms and governments in Canada.

Ongoing Projects/Projets en cours

**THE IMPACT OF
INHERITANCES ON THE
MORTGAGE MARKET IN
CANADA**

Objective:

To investigate the impact of inheritances on the mortgage market in Canada.

MHC Project Officer:

T. Elliot

Division:

Social and Economic Policy and
Research

Contractor:

Clayton Research Associates
1580 Kingston Road
Scarborough, Ontario
M1N 1S2

CIDN:

1588 100001

NATIVE PEOPLE/AUTOCHTONES

THE HOUSING CRISIS IN CANADA'S INUIT COMMUNITIES: FINAL REPORT.

Prepared by the Inuit Tapirisat of Canada. Prepared for Canada Mortgage and Housing Corporation and Indian and Northern Affairs Canada. Ottawa: Inuit Tapiriiksats Kanatami = Inuit Tapirisat of Canada, 1996.

This study discussed housing conditions in Inuit communities in Quebec, Labrador and the Northwest Territories. It concluded that without action, conditions would deteriorate due to the fast growing population and continued high unemployment. The study set out an action plan to the year 2005, dealing with training, prioritization, delivery and design review. In addition, targets were established for social and economic achievements.

NATIVE PEOPLE/AUTOCHTONES

Ongoing Projects/Projets en cours

ADDRESSING SPECIAL HOUSING NEEDS IN FIRST NATION COMMUNITIES

Objective:

To carry out a research study to ensure a First Nations perspective and First Nations involvement through the use of an advisory committee of members of the Housing Committee of the Policy Congress of Atlantic First Nation Chiefs.

CMHC Project Officer:

N. Koeck

Division:

Delivery and FP Relations Division

Contractor:

Mount Allison University
Department of Geography
Sackville, New Brunswick
E0A 3C0

CIDN:

1544 0100001

ANALYSIS OF MIGRATION AND RESIDENTIAL MOBILITY PATTERNS AMONG CANADA'S ABORIGINAL POPULATION

Objective:

To undertake a study examining both the migration and mobility patterns among Aboriginal groups. The study will determine the implications for a number of RCAP's mandates. The topics of the study will cover urban, women and youth perspectives, as well as the northern, land and economy and governance themes.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre for Future Studies in Housing and Living Environments

Contractor:

Royal Commission on Aboriginal Peoples
427 Laurier Avenue
6th Floor
P.O. Box 1993
Station "B"
Ottawa, Ontario
K1P 1B2

CIDN:

1171 0200001

APPLICATION OF HOME OWNERSHIP TENURES BY FIRST NATIONS COMMUNITIES ON-RESERVE

Objective:

To explore the concept of home ownership on-reserve, and how different communities have developed forms of home ownership or home ownership type tenures, so that other First Nations communities can learn from these models.

CMHC Project Officer:

N. Koeck

Division:

Delivery and FP Relations Division

Contractor:

Patrick Brascoupe Apikan Limited
Kitigan Zibi
P.O. Box 339
Maniwaki, Quebec
J9E 3C9

CIDN:

1401 0101001

FEASIBILITY STUDY TO OVERCOME BARRIERS FOR ABORIGINAL HOME OWNERSHIP

Objective:

Research and identify Aboriginal population statistics, average income levels; and the percentages in rental and ownership housing; etc.

CMHC Project Officer:

N. Koeck

Division:

Delivery and FP Relations Division

Contractor:

Gignul Non-Profit Housing Corporation
Suite 712
151 Slater Street
Ottawa, Ontario
K1P 5H3

CIDN:

1613 1500001

FOLLOW-UP TO ABORIGINAL HOUSING NEEDS STUDY

Objective:

To develop detailed housing condition information for specific Aboriginal groups.

CMHC Project Officer:

J. Engeland

Division:

Social and Economic Policy and Research

Contractor:

Ark Research Associates
165 Hinton Avenue North
Ottawa, Ontario
K1Y 0Z9

CIDN:

1598 0200001

PLANNING OF NATIVE NORTHERN COMMUNITIES

Objective:

An evaluation of the level of success of existing planning and housing practice for Native communities in the western portion of the Northwest Territories.

CMHC Project Officer:

D. Jamieson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Gino A. Pin
Sub Post Office no. 1
3502 Raccine Road
Yellowknife, Northwest Territories
X1A 2S9

CIDN:

1462 0200001

SECOND STAGE HOUSING FOR ABORIGINAL WOMEN

Objective:

Establish the need for second stage housing for Aboriginal women and their children and develop a transferable community-based model for use across Canada; develop a framework to measure the impact of housing conditions on the well-being of Aboriginal women and their children.

CMHC Project Officer:

N. Koeck

Division:

Delivery and FP Relations
Division

Contractor:

Native Women's Association of Canada
9 Melrose Avenue
Ottawa, Ontario
K1Y 1T8

CIDN:

1152 0100001

SYNTHESIS OF RESEARCH ON ABORIGINAL POPULATION - PHASE 1

Objective:

Prepare a final edited version of the report, Canada's Aboriginal Population 1981-1991, and two CMHC Research and Development Highlights for the reports, The Housing Conditions of Aboriginal People in Canada 1991 and Summary Report on Projections of the Population with Aboriginal Identity in Canada, 1991-2016.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre For Future Studies in Housing and Living
Environments

Contractor:

Four Directions Consulting Group
410-112 Market Avenue
Winnipeg, Manitoba
R3B 0P4

CIDN:

1590 0200001

THE NORTH/LE NORD

Ongoing Projects/Projets en cours

MEASUREMENT OF HOUSING NEED IN NORTHERN AND REMOTE AREAS

Objective:

Assess the feasibility of, and develop recommendations for, potential enhancements to existing measures of housing need that will better capture differences in the severity of problems between the north and the rest of Canada.

CMHC Project Officer:

J. Angus

Division:

Social and Economic Policy and Research

Contractor:

University of Winnipeg
Institute of Urban Studies
346 Portage Avenue
Winnipeg, Manitoba
R3C 0C3

CIDN:

1527 0200001

QUALITY OF LIFE/QUALITÉ DE LA VIE

Ongoing Projects/Projets en cours

THE COMMUNITY ORIENTED MODEL OF THE LIVED ENVIRONMENT: REVISION OF DATA TABLES AND ANNOTATED BIBLIOGRAPHY

Objective:

Update and revise measures and data sources for indicators and specific measures for the Community Oriented Model of the Lived Environment (COMLE) and update the annotated quality of life research.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre for Future Studies
in Housing and Living
Environments

Contractor:

Judy Bates
Department of Geography
York University
4700 Keele Street
North York, Ontario
M3J 1P3

CIDN:

1680 0200001

IMPACT D'UN PROGRAMME PARAMUNICIPAL SUR LE MARCHÉ DU LOGEMENT LOCATIF.

Préparé par Luba Serge avec la collaboration de Margaret Montfort. Ottawa : Société canadienne d'hypothèques et de logement, 1995. (Programme de subventions de recherche)

Cette étude vise à connaître l'impact du Programme d'acquisition de logements locatifs (PALL), géré par la Société d'habitation et de développement de Montréal (SHDM), sur le marché locatif avoisinant. Entre 1988 et 1993, la SHDM a acquis plus de 3 300 logements dans l'ensemble de la ville de Montréal. Les unités, souvent situés dans les quartiers les plus délabrés de la ville, étaient remises aux normes en utilisant des programmes provinciaux et municipaux et transférées à des organismes sans but lucratif ou des coopératives d'habitation. Une des questions de la présente étude est de voir comment réagiraient les propriétaires avoisinants qui se trouvent dans une situation généralement difficile face à un nouvel élément, soit le PALL, qui bouscule le marché local, souvent d'une façon importante.

L'étude reprend les quartiers utilisés dans l'évaluation entreprise par la SHDM. Deux zones d'intervention ainsi qu'une zone témoin ont été retenues dans quatre quartiers. L'analyse des impacts confirme que, dans les zones d'intervention majeure du PALL de certains quartiers, des investissements dans l'amélioration du parc ont été faites par les propriétaires privés. Dans deux quartiers, l'investissement dans la remise en état a été importante et la valeur des permis dans la zone d'intervention majeure est significativement plus élevée dans la période post-intervention pour les immeubles de six logements et plus. Par contre, l'activité dans les deux autres quartiers ne démontre aucun impact.

Un questionnaire sur les motivations et les perceptions de tous les propriétaires d'immeubles locatifs dans les trois zones des quatre quartiers a été envoyé par la poste. Les résultats démontrent que la propension de penser «long terme» est évidente: près de trois propriétaires sur quatre ont indiqué que c'était un facteur important dans la décision d'acheter et, quand on demande aux propriétaires combien d'années ils prévoient garder l'immeuble, 56,3% disent que ce sera pour plus de cinq ans. Deux tiers manifestent l'intention d'investir dans soit l'entretien ou la remise en état. Cet objectif de gestion à long terme est toutefois en contradiction quand on demande si les propriétaires ont jamais mis leur immeuble en vente : 51,2% répondent «oui» et parmi ceux-ci, 61,5% disent que la propriété est toujours en vente.

Le parc locatif privé connaît d'importants changements qui le transforment dramatiquement. Les propriétaires ont beaucoup de difficultés à vivre ces changements et les problèmes qui les accompagnent. L'intervention du PALL semble inciter à la remise en état dans certains quartiers. Ce sont les nouveaux propriétaires qui semblent croire qu'il y a un avenir pour ces quartiers. Toutefois, la majorité des unités demeurent entre les mains de propriétaires qui, généralement, ne veulent plus y rester et qui non seulement ne récupèrent pas leurs coûts, mais encourent parfois des pertes. Ces propriétaires sont très conscients des causes des changements : les politiques qui encouragent l'accession à la propriété, la fuite de la classe moyenne vers la banlieue et le fait qu'ils sont maintenant en concurrence avec le logement social pour la clientèle la plus défavorisée.

RENTAL HOUSING LOGEMENT LOCATIF

Ongoing Projects/Projets en cours

THE RESIDUALIZATION OF RENTAL TENURE: IMPLICATIONS FOR HOUSING POLICY

Objective:

Examine how both the rental housing stock and the profile of rental tenants has changed over the past 2 decades from 1971-91; explore how the changing tenant profile is perceived by private rental landlords; and determine if this change is significant in influencing the decisions of private rental landlords to disinvest in rental housing. The emphasis is not on the feasibility of new rental construction but on transactions in the existing rental stock.

CMHC Project Officer:

B. Sanscartier

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Stephen P. Pomeroy
Focus Consulting
40 Java Street
Ottawa, Ontario
K1Y 3L3

CIDN:

1463 0200001

LE SECTEUR LOCATIF PRIVÉ ET SA NOUVELLE CLIENTÈLE

Objet :

La revue de littérature (y inclus
des recherches sur l'internet)
aura comme objectif d'identifier
des approches et des

programmes qui visent des
relations harmonieuses entre les
propriétaires et leur nouvelle
clientèle.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

Luba Serge
29, rue Easton
Montreal (Québec)
H4X 1K9

NIC :

1648 0200001

RESIDENTIAL DEVELOPMENT AMÉNAGEMENT RÉSIDENTIEL

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A CITY OF TOWNS: ALTERNATIVES FOR THE PLANNING AND DESIGN OF HOUSING IN ST. JOHN'S, NEWFOUNDLAND.

*Prepared by Robert Mellin. Ottawa: Canada Mortgage and Housing Corporation, 1995.
(External Research Program)*

This research focuses on the urban form and houses of the older residential neighbourhoods in St. John's, Newfoundland, Canada. There are three main purposes for this study: first, to document the physical form of the older residential neighbourhoods by formulating a neighbourhood and housing typology (the older residential areas are quickly being eroded by unsympathetic new development); second, to analyse and interpret details of urban and house form that contribute to the character of these neighbourhoods; and third, to demonstrate that nearly all the ingredients that could contribute to sensible planning for new residential areas in St. John's are contained in the older residential areas. Much of the information is presented in graphic format using computer-generated three-dimensional models of houses and neighbourhoods. The intent is to develop a graphic analysis that is detailed enough to provide a historical record of the form of various neighbourhoods, and to place this information in a

RESIDENTIAL DEVELOPMENT/ AMÉNAGEMENT RÉSIDENTIEL

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format that would permit useful comparisons between older and newer residential neighbourhoods.

Selected residential areas in the older part of the city were analysed with regard to housing density, lot proportions, setbacks, street space, house types, house size, housing costs, development costs (neighbourhood affordability), solar orientation, block lengths, infrastructure lengths, planning regulations (zoning), landscape features (fences, flora, gardens), and other features such as pedestrian paths and alleys. From the analysis, it became apparent that the major factors influencing housing affordability were plot proportions, block lengths, block widths, and infrastructure lengths. General principles or alternatives are proposed for new housing development, and these are all based on the best urban aspects of the existing, older residential areas (for example, St. John's was once a city composed of small towns, with courtyards, bridging between dwellings, outbuildings, grid-pattern streets, small houses, lanes and pedestrian paths, and mixed-use zoning).

Ongoing Projects/Projets en cours

RESIDENTIAL STREET DESIGN: LEARNING FROM SUBURBIA

Objective:

To generate concrete design solutions based upon a thorough understanding of precedents, and introduce and stimulate new ideas for land developers and design professionals.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Sevag Pogharian
Sevag Pogharian Design
4643 Sherbrooke Street West
Suite 12
Montreal, Quebec
H3Z 1G2

CIDN:

1644 0200001

REVENUE AND NET COSTS ASSOCIATED WITH CONVENTIONAL AND ALTERNATIVE DEVELOPMENT PATTERNS

Objective:

Compare life-cycle revenues and net costs associated with two patterns of development: a conventional suburban development pattern and a mixed-use, more compact development planned according to the principles of "New Urbanisms".

CMHC Project Officer:

D. D'Amour

Division:

Social and Economic Policy and
Research

Contractor:

Hemson Consulting Ltd.
30 St. Patrick Street
Suite 1000
Toronto, Ontario
M5T 3A3

CIDN:

1552 0200001

RESIDENTIAL REHABILITATION RÉNOVATION DE LOGEMENTS

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CODE AND APPROVAL PROCESS MODELS FOR RESIDENTIAL RENOVATION: CASE STUDY = MODÈLES DE CODE ET DE PROCESSUS D'APPROBATION DE RÉNOVATION RÉSIDENTIELLE : ÉTUDE DE CAS.

Affordability and Choice Today (A.C.T.) Streamlined Approval Process Project / Association for Preservation Technology, Ottawa, Ontario. Prepared by Energy Pathways Inc. Prepared for the Federation of Canadian Municipalities, Canadian Home Builders' Association, Canadian Housing and Renewal Association and Canada Mortgage and Housing Corporation. Ottawa: The Associations: The Federation: The Corporation, 1995.

Despite the contribution that renovation activity makes to housing affordability, choice and quality, there are several key regulatory issues that deter renovation and add to its cost. To address these issues, the Association for Preservation Technology (APT), an Ottawa-based non-profit organization dedicated to building preservation and heritage, initiated an A.C.T. project to identify provisions of the National Building Code (NBC) and municipal approval processes that discourage residential renovation, and to recommend ways to address these challenges.

The project had four primary objectives:

- ° To identify a method for applying the NBC to existing dwellings;
- ° To propose a system for identifying the extent to which renovation activities must comply with the NBC, according to the nature and scope of the renovation, and to draft a set of "Alternate Technical Measures";
- ° To identify a method for assigning liability to the property owner in cases where the owner wishes to retain existing conditions that do not meet NBC requirements;
- ° To identify methods for reducing the time and effort required to obtain municipal approval for residential renovation projects.

This case study summarizes the findings and recommendations presented in the project team's final report "Technical Code Update for Residential Renovation".

NOTE: Bilingual/Bilingue

**MODÈLES DE CODE ET DE PROCESSUS D'APPROBATION DE RÉNOVATION
RÉSIDENTIELLE : ÉTUDE DE CAS = CODE AND APPROVAL PROCESS
MODELS FOR RESIDENTIAL RENOVATION: CASE STUDY.**

Abordabilité et choix toujours (A.C.T) projet de simplification du processus d'approbation / Association pour la préservation et ses techniques, Ottawa (Ontario). Préparé par Energy Pathways Inc. Préparé pour La Fédération canadienne des municipalités, L'Association canadienne des constructeurs d'habitations, L'Association canadienne d'habitation et de rénovation urbaine et La Société canadienne d'hypothèques et de logement. Ottawa : Les Associations : La Fédération : La Société, 1995.

Si la rénovation sait contribuer à améliorer l'abordabilité, le choix et la qualité du logement, plusieurs aspects réglementaires importants n'y font pas moins obstacle, tout en ayant pour effet d'en hausser le coût. Afin d'examiner cette situation, l'Association pour la préservation et ses techniques (APT), une organisation sans but lucratif d'Ottawa vouée à la préservation des bâtiments et des valeurs patrimoniales, a entrepris dans le cadre du programme A.C.T un projet devant permettre d'identifier les dispositions du Code national du bâtiment (CNB) et les processus d'approbation des municipalités qui font obstacle à la rénovation résidentielle et de recommander des moyens de composer avec ces situations.

Le projet poursuivait quatre principaux objectifs:

- ° Déterminer une méthode d'application du CNB aux logements existants;
- ° Proposer un système de détermination de la mesure dans laquelle les activités de rénovation doivent se conformer au CNB, suivant la nature et l'ampleur de la rénovation, et élaborer un ensemble de "mesures techniques de remplacement";
- ° Déterminer une méthode d'imputation de responsabilité au propriétaire pour les cas où celui-ci entend maintenir des conditions existantes qui ne se conforment pas aux prescriptions du CNB;
- ° Déterminer des méthodes de réduction du délai et de la démarche nécessaire à l'obtention de l'autorisation municipale d'entreprendre des projets de rénovation résidentielle.

Cette étude de cas résume les conclusions et les recommandations présentées dans le rapport final de l'équipe de projet intitulé "Technical Code Update for Residential Renovation".

NOTE: Bilingue/bilingual

RÉNOVATION RÉSIDENTIELLE : LE CADRE INDUSTRIEL : RAPPORT SOMMAIRE.

Préparé par Kathleen Maynard, Energy Pathways Inc. pour le Comité conjoint de perfectionnement des ressources humaines - Entrepreneur en rénovation résidentielle de l'Association canadienne des constructeurs d'habitations. Ottawa : Association canadienne des constructeurs d'habitations : Développement des ressources humaines Canada : Société canadienne d'hypothèques et de logement, 1996.

Ce rapport porte sur les facteurs qui définissent l'état de l'industrie de la rénovation résidentielle aujourd'hui même et ceux qui participeront à son évolution future. Les recherches faites ont permis d'établir des profils pour l'industrie de la rénovation, pour le rénovateur de résidences et le consommateur de services de rénovation. Les infrastructures, les ressources et les activités actuelles en matière d'éducation et de formation ont été identifiées. Le chapitre sur **l'industrie de la rénovation résidentielle** aborde les grandes questions touchant l'ensemble de l'industrie : profil, économique, impôt, règlements

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en matière de travail, garanties, inspections, codes et normes, technologie, environnement et partenaires de l'industrie. Le chapitre sur l'**entrepreneur en rénovation résidentielle** fournit des profils économiques et personnels ainsi qu'un aperçu de l'attitude actuelle des renovateurs sur les règlements de travail, les garanties, la technologie, l'environnement et les besoins en éducation et en formation des renovateurs. Celui sur le **consommateur de services de rénovation** présente des profils économiques et personnels en plus d'aborder le point de vue des consommateurs sur la protection de ces derniers, l'environnement et les besoins en éducation et en information des consommateurs.

NOTE: Also available in English under the title: *Residential Renovation Industry Framework: Summary Report.*

RESIDENTIAL RENOVATION INDUSTRY FRAMEWORK: SUMMARY REPORT.

Prepared by Kathleen Maynard, Energy Pathways Inc. for the Joint Human Resource Development-Residential Renovator Committee of the Canadian Home Builders' Association. Ottawa: Canadian Home Builders' Association: Human Resources Development Canada: Canada Mortgage and Housing Corporation, 1996.

This report discusses the factors that shape the residential renovation industry today and that will contribute to the evolution of the industry in the future. Profiles of the renovation industry, the residential renovator and the renovation consumer have emerged from the findings. Current education and training infrastructure, resources and activities have been identified. The chapter on residential renovation industry discusses key issues affecting the industry - economic profile, taxation, occupational regulation, warranties, inspections, codes and standards, technology, the environment and industry partners. The residential renovator provides economic and personal profiles, and insight into where renovators stand on occupational regulation, warranties, technology, the environment, and renovator education and training needs. The renovation consumer presents economic and personal profiles, and discusses consumer views on consumer protection, the environment and consumer education and information needs.

NOTE : Aussi disponible en français sous le titre : *Rénovation résidentielle : le cadre industriel : rapport sommaire.*

CONSTRUCTION D'UN INDICE SYNTHÉTIQUE POUR LES DÉPENSES DE RÉNOVATION RÉSIDENTIELLE AU QUÉBEC

Objet :

L'objectif de ce projet est de construire un indice synthétique précurseur des dépenses de rénovation résidentielle pour le Québec, dont les caractéristiques et les paramètres pourraient être éventuellement transposés aux six régions métropolitaines du Québec.

Agent de projet pour la SCHL :

G. Proulx

Division :

Centre d'analyse de marché

Contractant :

François Raymond
c/o Cirano
2020 rue Université
25ème étage
Montréal (Québec)
H3A 2A5

NIC :

1631 1000001

HOMEOWNER MOTIVATION AND INNER CITY REVITALIZATION: AN EXAMINATION OF RELATED FACTORS IN WINNIPEG

Objective:

To identify the revitalization process underway (e.g.) incumbent upgrading or gentrification in inner city areas demonstrating a high level of renovation activity.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Tom Carter
University of Manitoba
Faculty of Architecture
Architecture 2 Building
Winnipeg, Manitoba
R3T 2N2

CIDN:

1277 0200001

LOCAL INDICATORS OF RENOVATION SPENDING

Objective:

To study local indicators of renovation spending and determine the reliability of current measures of renovation activity at the CMA level, and make recommendations for the construction of comprehensive, reliable and timely indicators of renovation activity and develop the indicators for selected CMAs.

CMHC Project Officer:

G. Proulx

Division:

Market Analysis Centre

Contractor:

Clayton Research Associates
1580 Kingston Road
Scarborough, Ontario
M1N 1S2

CIDN:

1234 1001001

RENOVATING MULTIPLE HIGH-RISE RESIDENTIAL BUILDING FOR THE INFORMATION HIGHWAY

Objective:

To obtain information to guide building owners and managers, architects and engineers on the

options and alternatives to bring high-rise residential buildings up to date for the information highway.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre for Future Studies in Housing and Living Environments

Contractor:

Connors Architects and Planners
1489 Hollis Street
P.O. Box 606
Halifax, Nova Scotia
B3J 2R7

CIDN:

1684 0200001

RENOVATION IN CANADA CHAPTERS II, V, VI.

Objective:

Undertake the production of Chapters II, V, VI of the discussion paper "Renovation in Canada" and expand the existing appendix of this paper to include lessons learned from Scotland and The Netherlands.

CMHC Project Officer:

P. Archer

Division:

Technical Policy and Research Division

Contractor:

Marc Denhez
150 Laurier Avenue West
Ottawa, Ontario
K1P 5J4

CIDN:

1677 0300005

RESIDENTIAL REHABILITATION RÉNOVATION DE LOGEMENTS

RENOVATOR'S RESOURCE GUIDE: BUILDING SCIENCE AND HOUSE PERFORMANCE

Objective:

Development of the Renovator's
Resource Guide: Building
Science and House Performance

CMHC Project Officer:

T. Marshall

Division:

Technical Policy and Research
Division

Contractor:

Lio and Associates
88 Prince Arthur Avenue
Suite 300
Toronto, Ontario
M5R 1B6

CIDN:

1592 0300001

SEWAGE DISPOSAL/EAUX USÉES

Completed Reports/Rapports terminés

A PASSIVE FACULTATIVE WASTEWATER TREATMENT SYSTEM FOR SINGLE-FAMILY RESIDENTIAL USE.

Prepared by Ivo Van Bastelaere, NovaTec Consultants Inc. Prepared for Denis Barker & Associates Limited and for the Social and Economic Policy and Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996. (Housing Technology Incentives Program)

This paper describes the performance testing of a passive facultative treatment process for onsite treatment of wastewater from a single-family residential dwelling. The intent of the system design was to treat domestic wastewater to comparable quality as would be obtained with conventional, mechanical, secondary biological treatment plants, but in a passive manner. The process was based on the principal of solids separation and extended retention time for anaerobic digestion of biological materials.

The system used two tanks and a solids separating system. Influent was directed through a passive, self-cleaning screen. Solids greater than 3 millimetres in diameter, and approximately 5% of the liquid flow were diverted into a tank dedicated to the storage and passive digestion of solids, while the remainder of the influent that passed through the screen was directed to the liquids retention tank. Supernatant from the solids tank was directed to the liquids tank. The liquids tank utilized inlet piping designed to distribute the flow across the tank cross-section and an underflow clarifying weir.

The system successfully and reliably produced an effluent with a quality such that the total suspended solids (TSS) concentration was comparable to, or better than, effluent produced by conventional secondary treatment plants sized for single-family dwellings. The system was not able to reduce biochemical oxygen demand (BOD) concentrations to the same standard.

CONTOUR TRENCH SEPTIC FIELD DISPOSAL SYSTEM IN OTTO TOWNSHIP, ONTARIO

Objective:

To complete the design of a private sewage disposal system designed for five existing homes along Highway 112 in Otto Township, Ontario.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

H. Sutcliffe Limited
9 Wellington Street
P.O. Box 1208
New Liskeard, Ontario
P0J 1P0

CIDN:

0804 0200001

IMPROVEMENTS IN ON-SITE WASTEWATER TREATMENT

Objective:

To select a site for the experimental system, conduct site investigations, design the system and provide a monitoring plan, install water conservation devices, provide monitoring, operation, maintenance and site clean up services, liaison with Steering Committee members and regulators and provide progress reports and a final report which will contain all required information and data analysis.

CMHC Project Officer:

C. Ives

Division:

Technical Policy and Research
Division

Contractor:

Technical University of
Nova Scotia
Centre for Water Resources
Studies
1360 Barrington Street
P.O. Box 1000
Halifax, Nova Scotia
B3J 2X4

CIDN:

1047 0200001

LOWER COST ALTERNATIVE FOR MUNICIPAL SEWER INSPECTION AND MAINTENANCE

Objective:

To reduce subdivision servicing costs by the design, development and testing of a technically sound and innovative structure to replace, at a lower cost, the conventional manhole. Besides substantially reducing the capital cost, the proposed innovative structure can likely mitigate operation and maintenance problems associated with the construction of manholes; etc.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Butler Krebes & Associates Inc.
8616 - 51 Avenue
Suite 210
Edmonton, Alberta
T6E 6E6

CIDN:

1274 0200001

MONITORING PROCEDURES AND MAINTENANCE MANUAL FOR THE OFF-GRID WATER/WASTEWATER TREATMENT SYSTEMS IN CMHC'S TORONTO HEALTHY HOUSE

Objective:

To establish the standards and procedures for monitoring and operating the innovative off-grid systems in the Toronto Healthy House for water and wastewater treatment.

CMHC Project Officer:

C. Ives

Division:

Technical Policy and Research
Division

Contractor:

A.R. Townshend
930 Seven Springs Lane
RR #1
Athens, Ontario
K0E 1B0

CIDN:

0779 0209002

SEWAGE DISPOSAL/EAUX USÉES

Ongoing Projects/Projets en cours

A NEW PROCEDURE FOR EVALUATING THE PERFORMANCE OF ON-SITE SYSTEMS

Objective:

To assess the value of the "Leachfield Evaluation Test" claimed to be successfully used by agencies in California. This is a method for assessing the hydraulic performance of an onsite sewage disposal system.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

D.H. Waller
Technical University of
Nova Scotia
Centre for Water Resources
Studies
1360 Barrington Street
P.O. Box 1000
Halifax, Nova Scotia
B3J 2X4

CIDN:

1289 0200001

SOCIAL HOUSING/LOGEMENT SOCIAL

Ongoing Projects/Projets en cours

ANALYSIS OF THE RELATIVE COST AND EFFECTIVENESS OF SELECTED SOCIAL RENTAL HOUSING PROGRAMS

Objective:

To assess the effectiveness of selected rental housing programs in addressing the problems of affordability, adequate supply, and housing quality. The study will determine how traditional non-profit supply programs and shelter allowances perform, over time under different market conditions.

CMHC Project Officer:

P. Deacon

Division:

Social and Economic Policy and
Research

Contractor:

Canadian Housing and Renewal
Association
251 Laurier Avenue West
Suite 304
Ottawa, Ontario
K1P 5J6

CIDN:

1351 0600001

NATIONAL ENABLEMENT DEMONSTRATION INITIATIVE

Objective:

To undertake the development and coordination of a national enablement demonstration initiative to teach social housing groups the skills and techniques to use in order to develop self-help housing strategies.

CMHC Project Officer:

J. Burr

Division:

Delivery and FP Relations
Division

Contractor:

Canadian Housing and Renewal
Association
251 Laurier Avenue West
Suite 401
Ottawa, Ontario
K1P 5J6

CIDN:

1436 1500001

SUSTAINABLE DEVELOPMENT DÉVELOPPEMENT DURABLE

Completed Reports/Rapports terminés

VANCOUVER HEALTHY HOUSE MONITORING RESULTS: FINAL REPORT.

Prepared by Ken Cooper, SAR Engineering Ltd. Prepared for Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.

Canada Mortgage and Housing Corporation (CMHC) sponsored the Healthy Housing Design Competition to demonstrate to the Canadian public and housing industry that it is possible to design houses for the Canadian climate which are in keeping with the principles of sustainable development. The Vancouver Healthy House was monitored, in an occupied condition, from 12 February, 1994 through 30 April, 1995. Over this period of time there were two sets of occupants - a couple who had a baby during their stay, and two to four adults, from August, 1994 onward.

The study found that indoor temperatures and indoor air quality of the occupied house were generally within acceptable comfort ranges. However, the house overheated during the period from April to June, 1994 due to a combination of solar heat gain, windows that did not open in the third storey; heating system circulation when no heat was called for and heat recovery by the HRV on hot days.

Depending upon occupancy, hot water usage varied from approximately 87% to 116% of typical usage of about 68 L/person/day in B.C., pointing to the need for more consumer education. Total water usage varied from 64% to 117% of the predicted 212 L/person/day. Electrical energy use by the second set of occupants averaged 17.0 kWh per day for utilities, 7.7 kWh per day for fan energy use, and between 2.1 kWh per day in the summer to 4.8 kWh per day in winter for outdoor energy use.

There was no specific energy budget. However, the total energy usage amounted to approximately 23,500 kWh, or 172 kWh per square metre of heated floor area. Annual space heating demand (delivered to the space) amounted to 26.1 GJ, or 7,260 kWh.

Ongoing Projects/Projets en cours

COMMUNITY REPORTING AND INDICATORS PROJECT: AN ANALYTICAL TOOL FOR URBAN SUSTAINABILITY -SCOPING EXERCISE

Objective:

Investigate the feasibility of developing an analytical tool-set to assist communities and municipalities in their own assessment of progress toward sustainability.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre for Future Studies in Housing and Living Environments

Contractor:

ESSA Technologies Ltd.
1765 West 8th Avenue
Suite 300
Vancouver, British Columbia
V6J 5C6

CIDN:

1447 0200005

MULTIFAMILY HOUSING FOR COMMUNITY SUSTAINABILITY

Objective:

Develop information to assist municipalities and the development industry to develop land at higher than average densities while maintaining or improving the quality of life.

CMHC Project Officer:

F. Grammenos

Division:

Technical Policy and Research
Division

Contractor:

Quadrangle Architects Limited
380 Wellington Street West
Toronto, Ontario
M5V 1E3

CIDN:

1628 0300001

SUSTAINABLE LANDSCAPE DESIGN FOR RESIDENTIAL DEVELOPMENTS

Objective:

To highlight the link between sustainable development for housing with the condition, composition and use of native vegetation.

CMHC Project Officer:

S. Sandrock

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Karen Vagelatos
Vagelatos Associates Landscape Architecture Ltd.
207-2211 West 4th Avenue
Vancouver, British Columbia
V6K 4S2

CIDN:

1466 0200001

Ongoing Projects/Projets en cours

**VISUALIZING
SUSTAINABILITY:
ANALYZING PREFERENCES
FOR SUSTAINABLE
COMMUNITY DESIGN**

Objective:

The scope of this research is to provide a visual forum for the exploration of sustainable community design on the Internet. The purposes of the forum are to educate the public and to provide for the free and open exchange of ideas.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Professor Richard Perron
University of Winnipeg
Department of Landscape
Architecture
Winnipeg, Manitoba
R3T 2N2

CIDN:

1640 0200001

TELEWORK/TÉLÉTRAVAIL

Ongoing Projects/Projets en cours

**BEYOND THE
HOME OFFICE: AN
EXPLORATORY STUDY OF
RESIDENTIALLY-BASED,
SHARED TELEWORK
SPACES**

Objective:

To develop and explore a new concept - a residentially-based shared telework space.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Laura C. Johnson
Associates Inc.
374 Sackville Street
Toronto, Ontario
M4X 1S5

CIDN:

1458 0200001

**HOME-BASED BUSINESSES,
LOCAL ECONOMIC
DEVELOPMENT AND LAND
USE POLICY: CONFLICTS
AND OPPORTUNITIES**

Objective:

To carry out the research project entitled "Home-Based Businesses, Local Economic Development and Land Use Policy: Conflicts and Opportunities.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Dr. James E. Randall
Assistant Professor
University of Saskatchewan
Department of Geography
Saskatoon, Saskatchewan
S7N 0W0

CIDN:

1464 0201001

TRAVAIL À DOMICILE ET AJUSTEMENTS RÉSIDENTIELS

Objet :

Explorer comment les télétravailleurs adaptent leur logement en fonction de leurs besoins et établir des principes de rénovation fondés sur diverses situations.

de télétravail, qui pourraient améliorer la qualité de vie des résidents.

Agent de projet pour la SCHL :
D. Chamberland

Division :
Politiques et recherche sociale et économiques

Contractant :

Jocelyn Duff
Habitat sur mesure enr.
4626, de Bordeaux
Montréal (Québec)
H2H 2A1

NIC :
1643 0200001

WATER CONSERVATION EAU -- CONSERVATION

Ongoing Projects/Projets en cour

APPLICATION FOR SHOWER WASTE WATER HEAT RECOVERY

Objective:

To test the performance of a heat recovery shower product.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Heat Exchangers NF
Incorporated
26 Georgia Drive
Stephenville, Newfoundland
A2N 2T5

CIDN:

1500 0200001

DEVELOPMENT OF A RESIDENTIAL WATER USE MODEL

Objective:

To carry out the development of a residential water use model.

CMHC Project Officer:

P. Russell

Division:

Technical Policy and Research Division
Panel on Energy Research and Development

Contractor:

Centre for Water Resources Studies
Technical University of Nova Scotia
P.O. Box 1000
1360 Barrington Street
Halifax, Nova Scotia
B3J 2X4

CIDN:

1422 0200002
1422 0800001

MULTI-RESIDENTIAL BUILDING WATER EFFICIENCY STUDY

Objective:

To document water savings associated with water efficient plumbing fixture replacements in a multi-residential case study, and analyze the prospects for market penetration of water efficient technologies in multi-residential buildings.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Christopher Gates
REIC Consulting Services
15010 Yonge Street
Aurora, Ontario
L4G 1M6

CIDN:

1654 0200001

WATER CONSERVATION EAU -- CONSERVATION

Ongoing Projects/Projets en cours

THE SUSTAINABLE HOME WATER SYSTEM

Objective:

To develop a system which will collect rain water for non-potable uses in a house plus a grey water heat recovery and recycling system.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

A.C.E. Alternative and Conservation Energies Inc.
1909-10th Avenue S.W.
Calgary, Alberta
T3C 0K3

CIDN:

1224 0200001

WATER RECLAMATION PROJECT

Objective:

To develop a residential water reclamation system and to be in a position to hand over to Conservation Co-operative Homes Inc. a viable reclamation system.

CMHC Project Officer:

P. Russell

Division:

Technical Policy and Research Division

Contractor:

Conservation Co-operative Homes Inc.
140 Mann Avenue
Ottawa, Ontario
K1N 1E5

CIDN:

1573 02010003

WATER RECYCLING DEMONSTRATION

Objective:

Demonstrate water recycling at the Conservation Co-op in the Ottawa neighbourhood of Sandy Hill.

CMHC Project Officer:

P. Russell

Division:

Technical Policy and Research Division

Contractor:

Totten Sims Hubicki Associates
20 Terence Matthews Crescent
Kanata, Ontario
K2M 2C4

CIDN:

1573 0200001

WORK ENVIRONMENT ENVIRONNEMENT DU TRAVAIL

Ongoing Projects /Projets en cours

REVUE DES ÉCRITS SUR LES CHANGEMENTS DANS L'ENVIRONNEMENT DU TRAVAIL

Objet :

Effectuer une revue des écrits qui présentent les changements dans la nature du travail au cours des dernières années au Canada.

Agent de projet pour la SCHL :

B. Sanscartier

Division :

Politiques et recherche sociales et économiques
Centre d'études prospectives sur l'habitation et le cadre de vie

Contractant :

Université de Montréal
École de relations industrielles
C.P. 6128
Succursale Centre-Ville
Montréal (Québec)
H3C 3J7

NIC :

1681 0200001

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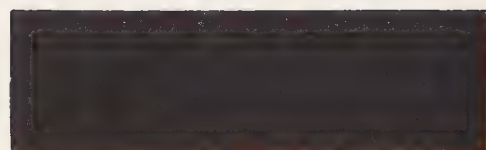
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RECHERCHE EN LOGEMENT - RAPPORT TRIMESTRIEL

Volume 3
Number 4
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INTRODUCTION

Under Part IX of the National Housing Act the Government of Canada provides funds to Canada Mortgage and Housing Corporation to conduct research into the social, economic and technical aspects of housing and related fields.

Housing Research Quarterly is compiled and produced on a quarterly basis by the Canadian Housing Information Centre. This publication provides information and access to research which is undertaken and sponsored by the Corporation.

The publication contains information on completed research reports, new publications, videos and bibliographies, as well as ongoing research projects. An alphabetical title index of items listed is included at the end for quick reference.

"Ongoing Projects" refer to research projects which are currently underway. No reports are yet available. Once the project is completed, and a report is available for distribution, it will be listed in *Housing Research Quarterly* under the "Completed Reports" area with a full bibliographic citation and abstract. The "Ongoing Projects" sections of *Housing Research Quarterly* contain the following information:

Title:
Title of the project, which may not necessarily be the same as the final report.

Objective:
Gives a brief description of the project.

CMHC Project Officer:
Individual within CMHC who is managing the project.

Division:
Division within CMHC which is managing the project.

Contractor:
Individual or firm undertaking the research.

IDN:
Contract Identification Number.

En vertu de la Partie IX de la loi nationale sur l'habitation le gouvernement du Canada fournit des fonds à la Société canadienne d'hypothèques et de logement pour la recherche sur les aspects sociaux, économiques et techniques du logement et des domaines connexes.

Recherche en logement-rapport trimestriel est produit chaque trimestre par le Centre canadien de documentation sur l'habitation. Il contient des renseignements sur la recherche entreprise et subventionnée par la Société.

La publication présente des renseignements sur les rapports de recherche, les nouvelles publications, les vidéos et les bibliographies, ainsi que sur les projets de recherche en cours. Une liste alphabétique par titres, facile à consulter, se trouve à la fin de l'ouvrage.

Tous les projets non terminés, n'ayant pas encore fait l'objet d'un rapport sont des «projets en cours». Une fois qu'il sera terminé, publié et disponible, le rapport figurera dans la publication *Recherche en logement-rapport trimestriel* sous la rubrique «Rapports terminés» avec références bibliographiques et sommaire. Les sections «Projets en cours» de *Recherche en logement-rapport trimestriel* contiennent les renseignements suivants :

Titre :
Titre du projet, qui n'est pas nécessairement le même que celui du rapport final.

Objet :
Brève description du projet.

Agent de projet pour la SCHL :
Personne au service de la Société qui gère le projet.

Division :
Division de la SCHL chargée de gérer le projet.

Contractant :
Personne ou firme chargée de la recherche.

NIC :
Numéro d'identification du contrat.

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MODELLING OF ROAD NOISE AND OPTIMAL BARRIER DESIGN.

Prepared by K.R. Fyfe and C.C. Harrison. Ottawa: Canada Mortgage and Housing Corporation, 1995. (External Research Program).

Numerous models have been developed around the world for conducting road noise studies that claim to account for many geometrical factors and acoustic properties, but most, if not all, have been carried out using geometric energy-based analysis that by and large ignores phase. This assumption is valid for higher frequency regimes, but is inadequate for the low frequency spectrum typical of traffic noise. This report describes and compares traditional energy-based models with more recently developed wave-based models. In particular, a two dimensional boundary element model is applied to systematically compare variations of the barrier's size, cross-sectional shape, absorptive coatings and general orientation. A barrier insertion loss rating parameter, that takes into account the traffic noise spectrum, is introduced to facilitate comparison of the different configurations.

Several significant relationships between barrier design characteristics and insertion loss have been observed. The results obtained for the single barrier cases suggest a basically linear relationship between the insertion loss and changes in basic barrier parameters such as height, width, absorptive coating, as well as source and receiver locations. This suggests that results for a geometry with small variations from the standard case may be able to be tabulated, rather than recomputed for each special case.

For single barriers, absorptive coatings were found to not have significant positive improvements in the barrier performance except when the source was located close to the barrier. Alterations of the barrier cross-sectional shape were observed to have significant influence on the barrier's acoustic performance. A tee-shaped barrier, for example, was found to have an insertion loss 5dB greater than that for a semi-circular mound of the same height. Barriers on either side of the noise source have also been studied. The addition of a second barrier greatly impairs the acoustic performance of the shadow region of a single barrier unless absorptive coatings are applied to the source side of the barriers.

ACOUSTICS/ACOUSTIQUE

Ongoing Projects/Projets en cours

ISOLATION ACOUSTIQUE PROCURÉE PAR LES FENÊTRES DE PROJETS RÉSIDENTIELS

Objet :

Déterminer la performance acoustique des fenêtres qui sont le plus couramment utilisées dans l'industrie de la construction.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Michel Morin MJM Conseillers en acoustique inc.
6555, chemin Côte-des-Neiges
Bureau 440
Montréal (Québec)
H3S 2A6

NIC :

1636 0200001

QUALIFICATION DU DEGRÉ DE CONFORT ACOUSTIQUE PROCURÉ PAR LES IMMEUBLES MULTILOGEMENTS

Objet :

L'objectif de la recherche est de doter l'industrie de la construction d'un outil fiable d'évaluation du degré de confort acoustique d'un logement. Ceci peut être accompli en regroupant les connaissances acquises lors de projets de recherche précédents sous forme d'objectifs d'isolation sonore et en élaborant un protocole d'évaluation préliminaire.

Agent de projet pour la SCHL :

M. Desbiens

Division :

Politiques et recherche sociale et économiques
Programme de subventions de recherche

Contractant :

Michel Morin
MJM Conseillers en Acoustique inc.
6555, chemin Côte-des-Neiges
Bureau 440
Montréal (Québec)
H3S 2A6

NIC :

1461 0200001

ATTICS/GRENIERS

Ongoing Projects/Projets en cours

DEMONSTRATION OF IMPROVED ATTIC VENTILATION AND MOISTURE CONTROL STRATEGIES

Objective:

Test unconventional attic ventilation strategies in both new and existing houses. Use the existing attic computer program to help select which venting strategy will work best.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research
Division

Contractor:

Sheltair Scientific Ltd.
#2-3661 West 4th Avenue
Vancouver, British Columbia
V6R 2P1

CIDN:

1377 0200001
1377 0800001

BUILDING LAW RÉGLEMENTATION DE LA CONSTRUCTION

Ongoing Projects/Projets en cours

COMPUTER CONFERENCING TO IMPROVE TRAINING ON RESIDENTIAL BUILDING CODES AND REGULATIONS

Objective:

To develop an Internet web page through a jurisdiction overriding various municipalities (e.g. Greater Vancouver Regional District) utilizing current hypertext machine language (HTML), and technology that will contain a conferencing module to allow computer interactivity between the key stakeholders and the development

of an expert system database; establish an evolving body of knowledge in the critical residential design, construction and permitting areas (e.g. building envelope and fire safety); and explore the development of other knowledge bases.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research

External Research Program

Contractor:

John J. Guenther
Manager Inspections
The City of North Vancouver
141 West 14th Street
North Vancouver, British Columbia
V7M 1H9

CIDN:

1632 0200001

BUILDING MATERIALS MATÉRIAUX DE CONSTRUCTION

Ongoing Projects/Projets en cours

ADJUST-A-FORM

Objective:

Development of ideas for adjustable, reusable forms. Specifically the project includes the inception to the development of a specific product ready for marketing. The end result is a product that saves builders time and material and therefore project cost.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Raymax Construction Limited
1038 Lesperance Road
Tecumseh, Ontario
N8N 1W8

CIDN:

1501 0200001

BUILDING ADAPTABILITY: A SURVEY OF SYSTEMS AND COMPONENTS

Objective:

To create a catalogue of building systems and components as well as design principles which could be used to improve the adaptability of buildings.

CMHC Project Officer:

F. Grammenos

Division:

Technical Policy and Research Division

Contractor:

Young + Wright Architects Inc.
172 St. George Street
Toronto, Ontario
M5R 2M7

CIDN:

160 50200001

BUILDING MATERIALS MATÉRIAUX DE CONSTRUCTION

Ongoing Projects/Projets en cours

PERFORMANCE OF BOX BEAMS

Objective:

Review the design specifications, production, assembly, and testing/monitoring criteria for box beams, and finalize the design and details of production and testing and monitoring protocol.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology
Incentives Program

Contractor:

Art Woski
4133 Northcliffe Avenue
Montreal, Quebec
H4X 3L2

CIDN:

1176 0200001

PLUMB SEAL

Objective:

To prepare final design work, prototype development, testing and reporting of the plumb seal.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology
Incentives Program

Contractor:

R & S Enviro Products Ltd.
1 Church Street
Unit 10
Keswick, Ontario
L4P 3E9

CIDN:

1348 0200001

PRO TRIM

Objective:

To review the design, installation and testing/monitoring criteria for the system and finalize the design and details of a testing and monitoring protocol. The testing/monitoring will be designed to determine design requirements for optimum installation and removal procedures and the performance characteristics of the system through climatic and structural variations found in the indoor residential environment.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology
Incentives Program

Contractor:

Eroica Industries Limited
Box 1886
Espanola, Ontario
P0P 1C0

CIDN:

1395 0200001

CITY PLANNING AND HUMAN SETTLEMENTS URBANISME ET ÉTABLISSEMENTS HUMAINS

Completed Reports/Rapports terminés

HABITAT II: CANADIAN NATIONAL REPORT: UNITED NATIONS CONFERENCE ON HUMAN SETTLEMENTS, ISTANBUL, TURKEY, JUNE 1996 = HABITAT II : RAPPORT NATIONAL CANADIEN : CONFÉRENCE DES NATIONS UNIES SUR LES ÉTABLISSEMENTS HUMAINS, ISTANBUL (TURQUIE) JUIN 1996.

*Ottawa: Canada Mortgage and Housing Corporation = Société canadienne
d'hypothèques et de logement, 1996 (NHA/LNH 6909)*

The content of this report addresses the two central themes of Habitat II - adequate shelter for all and sustainable human settlement development in an urbanizing world.

The report describes Canada's housing system, the jurisdictional and policy context for the development of housing, the condition of the housing stock, and current and anticipated housing trends. The evidence indicates that housing conditions have improved remarkably for most Canadians and that efforts are underway to make housing more sustainable. However, there are still households living in substandard housing including many in Aboriginal communities.

The report also identifies current planning and development trends and highlights the implications for sustainability. A number of components of the urban environment, ranging from transportation to waste water treatment and use of land, are examined. The report highlights initiatives introduced by the various levels of government, the private sector and community groups to achieve a more sustainable environment. Finally, the report addresses the various activities of Canadian agencies that assist other countries to provide adequate shelter and improve the sustainability of development.

NOTE: Bilingual/bilingue

§

Ce rapport porte sur les deux thèmes centraux d'Habitat II - un logement convenable pour tous et l'aménagement d'établissements humains durables dans un monde en voie d'urbanisation.

Le rapport traite du système de logement du Canada, le contexte des politiques et des compétences qui entoure la production de logements, l'état du parc de logements ainsi que les tendances actuelles et prévues dans ce domaine. On peut constater que les conditions de logement de la plupart des Canadiens manifestent une amélioration remarquable, et qu'on travaille à rendre les habitations plus durables. Toutefois, certains ménages vivent encore dans des logements inférieurs aux normes, dont plusieurs dans les collectivités autochtones.

Le rapport dégage également les tendances actuelles en matière d'urbanisme et d'aménagement et les conséquences qu'elles comportent pour la durabilité. Plusieurs composantes du milieu urbain sont étudiées, dont les transports, le traitement des

CITY PLANNING AND HUMAN SETTLEMENTS URBANISME ET ÉTABLISSEMENTS HUMAINS

Completed Reports/Rapports terminés

eaux usées et l'utilisation du territoire. Le rapport souligne les initiatives mises en place par les divers paliers de gouvernement, le secteur privé et les associations communautaires en vue de rendre l'environnement plus durable. Enfin, le rapport traite des diverses activités des organismes canadiens qui aident les autres pays à assurer un logement convenable et à améliorer la durabilité du développement.

NOTE : Bilingue/bilingual

PLANNING THE ACTIVE NEIGHBOURHOOD: A DISCUSSION OF RESIDENT-DIRECTED NEIGHBOURHOOD PLANNING: A PAPER PREPARED IN SUPPORT OF A PRESENTATION AT THE 1996 MEETING OF THE CANADIAN INSTITUTE OF PLANNERS.

Prepared by W.H. James Taggart. Ottawa: Canada Mortgage and Housing Corporation, 1996.

Planners face a special challenge in responding to the Brundtland Commission's call for the empowerment of disadvantaged local populations which they can address within the concept of resident-directed planning. Planners can provide the tools these citizens need to become truly effective participants, whether it be knowledge of community survey techniques or introductory concepts in democratic structuring and project management.

The federal government has supported local community involvement in housing and urban issues through a variety of programs over the past thirty years. Examples include the co-operative housing programs, community resource organization funding and, perhaps most relevant, the Neighbourhood Improvement Program from the 1970s. The community-building success of one low-income community is provided as illustrative of the potential of community-based approaches. Various evaluations have demonstrated the benefits of resident-initiated and resident-directed efforts, largely focusing on the development of new skills and the enhanced self-reliance of participants. Other potential benefits include the leverage of a wide range of social goods by the empowered citizenry. On the other hand, a number of potential problems of citizen-controlled planning have been suggested, ranging from NIMBYism, through the issue of parochial versus wider interests, to the question of how representative participants are of the population and the danger of cliques.

One of the most prevalent myths throughout the debate has been that home owners are the most committed residents, perhaps founded on the notion that economic self-interest is the most powerful force in human decisions. A study of townhouse occupants under four different tenure forms found strong contradictory evidence: freehold owners were less likely to be active in their neighbourhoods than condo owners and most particularly less active than members of not-for-profit co-ops. At the low end of the scale, tenants exhibited both the lowest satisfaction and participation, with rates far below what could be predicted on the basis of their relative income or education levels.

ÉTUDE DE PERFORMANCE D'UN SYSTÈME DE MURS À OSSATURE D'ACIER RECOUVERTE D'UN PLACAGE DE BRIQUE : RÉSULTATS DE LA PHASE 2.

Préparé par Steven P. Laviolette et H. Keller, Keller Engineering Associates Ltd. Préparé pour la Division de l'innovation dans l'habitation, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1995.

Dans le cadre du programme d'évaluation de la SCHL, la firme Keller Engineering Associates Inc. a étudié la tenue en service d'un mur à ossature d'acier recouverte d'un placage de brique (OA-PBr). Les chercheurs ont contrôlé la performance d'un mur d'essai au moyen de capteurs de température, d'humidité et de pression d'air qu'ils ont raccordés à un système informatisé d'enregistrement automatique de données. Après la période de contrôle, des ouvertures d'inspection ont été ménagées dans le mur d'essai afin de vérifier les résultats de l'analyse des données. Le présent rapport fait état des conclusions de la deuxième année d'étude de performance.

Les résultats de la phase 2 sont similaires à ceux obtenus lors de la première année d'étude. Bien que le mur OA-PBr réponde aux normes de construction actuelles, il n'offre pas la performance escomptée. À longue échéance, l'humidité emprisonnée dans la cavité et le placage de brique pourrait entraîner de graves problèmes. Les ponts thermiques qui se forment au niveau des poteaux d'ossature diminuent aussi la performance du mur. Les problèmes de performance observés sont surtout le fait de l'inefficacité du pare-air/pare-vapeur, d'une mauvaise aération de la cavité et de l'absence d'isolation extérieure. Ces résultats font ressortir la nécessité d'améliorer les normes de conception et de construction relatives aux murs OA-PBr.

NOTE: Also available in English under the title: *Performance Monitoring of a Brick Veneer / Steel Stud Wall System: Phase 2 Results.*

EXTERIOR INSULATION FINISH SYSTEMS: LABORATORY EVALUATION OF MATERIALS AND JOINTS SUBJECTED TO ARTIFICIAL CONDITIONING: CANADA MORTGAGE & HOUSING CORPORATION (CMHC) RESEARCH REPORT.

Prepared by Lawrence Gibson. Testing conducted by Doug Docherty, Ken Zeleschuk and Geri Nischio. Prepared for Housing Innovation Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC 1995.

During the past decade, Exterior Insulation Finish Systems (EIFS) have become a popular alternative to traditional cladding systems; however, over the last few years some concern has been raised on the durability of the systems to resist weathering. This report outlines testing conducted on EIFS joints to evaluate bond strength and water resistance of a number of different joint designs when exposed to accelerated aging conditions and simulated joint movement. Tests were also conducted on the EIFS lamina to evaluate its water vapour permeance, thermal coefficient of expansion and dry shrinkage.

CLADDING/PAREMENT

Completed Reports/Rapports terminés

The main conclusions that were drawn from the testing are summarized below:

- Multi-component urethane low modulus sealant had the greatest bond strength to a primed basecoat, while the silicone sealant exhibited the greatest elongation when bonded to a primed basecoat.
- Joint designs using some sort of secondary seal provided better resistance to water infiltration than did the traditional systems.
- Moisture permeability was highly affected by the lamina thickness; thin lamina was found to contain more imperfections that allowed moisture penetration.
- The dry shrinkage rate of the lamina during curing was found to be relatively small (in the 1 mm/m range).
- The thermal coefficient of expansion was in the order of 0.011 mm/m.

NOTE : Aussi disponible en français sous le titre : *Systèmes de finition et d'isolation extérieurs : évaluation en laboratoire de matériaux et de joints exposés à des conditions contrôlées.*

PERFORMANCE MONITORING OF A BRICK VENEER/STEEL STUD WALL SYSTEM: PHASE 2 RESULTS.

*Prepared by Steven P. Laviolette and H. Keller, Keller Engineering Associates Inc.
Prepared for Housing Innovation Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.*

As part of the CMHC evaluation program, Keller Engineering Associates Inc. carried out in situ performance monitoring of a brick veneer/steel stud (BV/SS) wall system. The performance of a test wall was monitored using various temperature, moisture and air pressure sensors that were connected to an automatic data logging system. In addition, inspection openings were made in the test wall after the monitoring work was completed in order to verify the results of the data analysis. This report outlines the findings of the second year of performance monitoring.

The results of Phase 2 are similar to those found in the first year of the study. Although the BV/SS wall system meets current construction standards, the wall is not performing in a satisfactory manner. Moisture trapped within the cavity and in the brick veneer may lead to serious distress problems over the long term. Thermal bridging at the studs also reduces the performance of the wall. These observed performance problems are mainly due to an ineffective air/vapour barrier system, inadequate cavity venting and a lack of exterior insulation. These results underscore the need for improved design and construction standards for BV/SS wall systems.

NOTE : Aussi disponible en français sous le titre : *Étude de performance d'un système de murs à ossature d'acier recouverte d'un placage de brique : résultats de la phase 2.*

**SYSTÈMES DE FINITION ET D'ISOLATION EXTÉRIEURS :
ÉVALUATION EN LABORATOIRE DE MATÉRIAUX ET DE JOINTS
EXPOSÉS À DES CONDITIONS CONTRÔLÉES : RAPPORT DE
RECHERCHE DE LA SOCIÉTÉ CANADIENNE D'HYPOTHÈQUES ET DE
LOGEMENT (SCHL) .**

Préparé par Lawrence Gibson. Essais entrepris par Doug Docherty, Ken Zeleschuk et Geri Nischio. Préparé pour la Division de l'innovation dans l'habitation, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1995.

Durant la dernière décennie, les systèmes de finition et d'isolation extérieurs sont devenus une solution de rechange populaire aux parements traditionnels. Or, au cours des dernières années, on s'est aperçu que la résistance aux intempéries de ces systèmes pouvait laisser à désirer. Ce rapport fait état d'essais menés sur les joints des systèmes de finition et d'isolation extérieurs en vue de déterminer la résistance d'adhésion et la résistance à l'eau de certains types de joints lorsqu'ils sont soumis à un vieillissement accéléré et à un mouvement simulé. Les essais ont également porté sur la lame de ces systèmes afin d'en évaluer la perméance à la vapeur d'eau, le coefficient de dilatation thermique et le retrait au séchage.

Les principales conclusions tirées des essais sont résumées ci-dessous :

- Le complexe de scellement à faible module, à base d'uréthane, offrait la plus grande résistance d'adhésion sur une couche de fond avec apprêt alors que le produit de scellement à base de silicone présentait le meilleur degré d'allongement lorsqu'il était appliqué sur une couche de fond avec apprêt.
- Les joints qui bénéficiaient d'un dispositif de scellement secondaire offraient une meilleure résistance à l'infiltration d'eau que les joints de surface traditionnels dont l'usage est courant.
- L'épaisseur de la lame influait beaucoup sur la perméabilité à l'humidité. En effet, les lames minces présentaient davantage d'imperfections laissant passer l'humidité.
- Durant le séchage, les taux de retrait au séchage de la lame se sont révélés relativement faibles, soit de l'ordre de 1 mm/m.
- Le coefficient de dilatation thermique obtenu était de l'ordre de 0,011 mm/m.

NOTE: Also available in English under the title: *Exterior Insulation Finish Systems: Laboratory Evaluation of Materials and Joints Subjected to Artificial Conditioning: Canada Mortgage & Housing Corporation (CMHC) Research Report.*

CLADDING/PAREMENT

Completed Reports/Rapports terminés

VENTS, VENTILATION DRYING, AND PRESSURE MODERATION.

Prepared by Eric Burnett and John Straube, Building Engineering Group, University of Waterloo. Ottawa: Canada Mortgage and Housing Corporation, 1995. (External Research Program).

The orientation, size, and nature of vents in screened exterior wall systems are important to wall performance because these characteristics affect venting, ventilation and pressure moderation. With funding from CMHC's External Research Program, the Building Engineering Group at the University of Waterloo undertook an experimental and theoretical study of vents and venting in screened walls. The objective of this study was to define the problems and potentials, develop upper and lower bounds of likely performance, and provide some theory and complementary experimental measurements as a precursor to future more detailed and directed studies. The scope of the study extended to all screened and vented exterior wall systems. Masonry veneer walls were of special interest because of their wide use and the special importance of ventilation to this type of wall.

Ventilation, even small amounts, can provide significant benefits to wall performance, mostly by contributing to the removal of moisture from behind the screen. If unobstructed cavities and several strategically located large vents are provided in a screened wall, significant ventilation air flow can occur, even with the very small driving pressures that typically occur in service. The same measures will allow for the moderation of wind-induced pressure differences across the screen.

Laboratory testing of air flow through proprietary masonry vent inserts shows that these inserts greatly reduce ventilation flow. The flow of air through vents driven by dynamic pressure variations is greater, sometimes significantly so, than when driven by a static pressure difference.

Designing new or the retro-fit of existing wall systems that encourage ventilation flow can greatly increase the drying potential of a wall assembly. In masonry veneer construction, it is recommended that minimum venting, i.e., an open head joint every 600 mm o.c. at the top and bottom of a 2.5 m high cavity or 0.2% of the wall area, should be provided. To achieve significant benefits from pressure moderation and ventilation drying, at least three times this area (0.6% of wall area) should be provided. To ensure clear cavities (which encourage good ventilation and allow drainage), the minimum width of the air space should be 30 mm; preferably, a width of 40-50 mm should be provided.

MONITOR THE PERFORMANCE OF AN IMPROVED WALL

Objective:

Monitor the performance of the test wall located at 312 Cumberland Street in Ottawa so that the performance of the wall will be documented when the head joints are opened up in order to permit natural ventilation in the wall cavity of the test wall. The proposed work will help determine the effectiveness of having both top and bottom ventilation in a wall.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research Division

Contractor:

Keller Engineering Associates Inc.
1390 Prince of Wales Drive
Ottawa, Ontario
K2C 3N6

CIDN:

0411 0305001

PREPARATION OF BEST PRACTICE GUIDE FOR FLASHING DETAILS, MASONRY VENEER/ CONCRETE BLOCK CONSTRUCTION AND WOODFRAME CONSTRUCTION

Objective:

To prepare three guides on building envelope design: 1) a 'best practice' guide for concrete block exterior wall construction; 2) a 'best practice' guide for various exterior wall assemblies with wood frame construction; 3) a 'best practice' guide for the flashing of wood, concrete and steel frame building envelopes. The documents will contain details, specifications, sequence of

construction and information on inspection and commissioning.

CMHC Project Officer:

S. Marshall

Division:

Technical Policy and Research Division

Contractor:

Robert Halsall & Associates/Otto & Bryden Arch.
210 Gladstone Avenue
Ottawa, Ontario
K2P 0Y6

CIDN:

0974 0300001

PROTECTING GYPSUM SHEATHING IN INSULATED STEEL-STUD WALLS

Objective:

Prepare and test wall systems that include combinations of three different warm face treatments and six different cold side materials. The warm face of the wall systems will be treated in one of the following ways: no protection; a vapour permeable but water repellent membrane such as Tyvek or Typar; a vapour barrier such as polyethylene.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Kim Pressnail
University of Toronto
35 St. George Street
Toronto, Ontario
M5S 1A4

CIDN:

1282 0200001

RAIN COMPUTER PROGRAM AND USER MANUAL UPDATE AND TUTORIAL

Objective:

To revise the user manual to provide the designer with direct information on different aspects of pressure-equalized rainscreen wall design (such as compartmentalization, vent area design, flexibility, etc.) In the revised manual, a section will be reserved for information on the limitations of the new RAIN Program.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research Division

Contractor:

Rowan William Davies & Irwin Consulting Engineers
650 Woodlawn Road West
Guelph, Ontario
N1K 1B8

CIDN:

1258 0300003

RAIN CONTROL AND WIND DRIVEN RAIN

Objective:

To produce guidelines for the testing and commissioning of pressure equalized rainscreen walls.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research Division

Contractor:

Quirouette Building Specialists
18 Crispin Private
Vanier, Ontario
K1K 2T8

CIDN:

1123 0304002

Ongoing Projects/Projets en cours

DURABILITY AND REPAIR OF CONCRETE: A PUBLICATION FOR BUILDING OWNERS AND MANAGERS

Objective:

Completion of an illustrated text for a practical document on the restoration of structural concrete for building owners and managers.

CMHC Project Officer:

C. Soroczán

Division:

Technical Policy and Research
Division

Contractor:

G.G. Litvan
248 Range Road
Ottawa, Ontario
K1N 8J8

CIDN:

1512 0200001

DEVELOPMENT OF A NEW EDITION OF THE STANDARD FOR CONCRETE CONSTRUCTION FOR HOUSING AND SMALL BUILDINGS (CSA A438)

Objective:

To carry out the development of a new edition of the standard for concrete construction for housing and small buildings (CSA A438).

CMHC Project Officer:

J. Robar

Division:

Technical Policy and Research
Division

Contractor:

Canadian Standards
Association
178 Rexdale Boulevard
Toronto, Ontario
M9W 1R3

CIDN:

1259 0200001

PLACEMENT-HABITAT DESJARDINS : APPRÉCIATION DU PROGRAMME.

Préparé par Robert Chagnon. Ottawa : Société canadienne d'hypothèques et de logement, 1995. (Programme de subventions de recherche).

Alors qu'à travers le Canada s'expérimentaient différentes formules de financement de projets pour personnes retraitées du types de copropriété ou de bail viager, la Fédération des Caisses populaires Desjardins de Montréal et de l'Ouest du Québec initiait, en 1987, le programme expérimental, Placement-Habitat, en vue de promouvoir le développement de l'habitation s'adressant aux pré-retraités et retraités à revenus moyens et disposant d'une certaine liquidité à placer. Depuis, 97 unités de logement ont été réalisées dans différents milieux urbains à travers le Québec.

Ce programme consiste en une formule dont le concept est basé sur le principe de l'usufruit, c'est-à-dire qu'il constitue un démembrement du droit de propriété laissant aux acquéreurs un droit d'usage sans nécessairement leur donner toutes les responsabilités inhérentes au fait d'être propriétaire en bonne et due forme. Ce programme permet d'acquérir, moyennant une mise de fonds, un droit d'usufruit qui est enregistrée contre l'unité de logement désignée. En adhérant au programme Placement-Habitat, l'acquéreur détient alors un logement en copropriété divise, détenu par un organisme sans but lucratif connu sous le nom de Habitations populaires Desjardins.

Les résultats de cette étude mettent en évidence l'importance que les personnes âgées de 55 ans et plus accordent à la sécurité de la formule du programme Placement-Habitat en ce qui a trait à l'assurance rachat, à l'exclusivité des projets à des personnes de leur âge et à la sécurité des lieux. L'avenir se présente cependant différemment pour les administrateurs des deux corporations concernées. Les administrateurs des Habitations populaires Desjardins du Centre du Québec, poursuivent le développement par la réalisation d'un nouveau projet de six (6) logements et agiront comme mandataire des autres fédérations des Caisses populaires Desjardins dans les autres régions du Québec. Quant aux administrateurs des Habitations populaires Desjardins de Montréal et de l'Ouest du Québec ils ont décidé de mettre fin au programme et de convertir les unités en copropriété conventionnelle, tout en respectant les ententes convenues avec les occupants actuels.

CONTAMINATED LANDS TERRAINS CONTAMINÉS

Ongoing Projects/Projets en cours

THE COMPILATION OF HOUSING DATA FOR SITE SPECIFIC RISK ASSESSMENT PROCEDURES

Objective:

Compile housing data to be used for site specific risk assessments and prepare draft of a handbook to be used by site assessors when selecting house characteristics.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research
Division

Contractor:

Figley Consulting Associates
Ltd.
350 Crean Crescent
Saskatoon, Saskatchewan
S7J 3X2

CIDN:

1534 0200001

EVALUATION OF SITE SPECIFIC RISK ASSESSMENTS FOR HOUSES

Objective:

To carry out the evaluation of site specific risk assessments for houses.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research
Division

Contractor:

Golder Associates Ltd.
500-4260 Still Creek Drive
Burnaby, British Columbia
V5C 6C6

CIDN:

1534 0200002

COOPERATIVE AND NON-PROFIT HOUSING LOGEMENT SANS BUT LUCRATIF ET COOPÉRATIVES

Ongoing Projects/Projets en cours

CONSERVATION DE PATRIMOINE IMMOBILIER COOPÉRATIF

Objet :

Décrire la prise en charge par les membres des activités d'entretien dans les coopératives d'habitation au Québec; identifier l'action des organismes d'assistance dans ce domaine; préciser les moyens par lesquels les activités d'entretien et les interventions des différents acteurs peuvent être optimisées.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

André Poulin
Centre de gestion des coopératives
Écoles des hautes études commerciales
640-3333, chemin de la Reine-Marie
Montréal (Québec)
H3V 1A2

NIC :

1281 0200001

INTÉGRATION DES MEMBRES PRATIQUES DE GESTION DES COOPÉRATIVES D'HABITATION

Objet :

La recherche vise à étudier les processus d'intégration et d'habitation au sein des pratiques de gestion en milieu coopérative d'habitation.

Agent de projet pour la SCHL :

N. Gervais

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Madame Marie J. Bouchard
Université du Québec à Montréal
Case postale 6192
Succursale Centre-ville
Montréal (Québec)
H3C 4R2

NIC :

1451 0200001

TRAINING & NON-PROFIT HOUSING ASSOCIATIONS

Objective:

Contribution to create a self-sustaining program to establish a consistent and coherent approach to education and training for staff and volunteer board members of non-profit housing associations across Canada.

CMHC Project Officer:

B. Lortie

Division:

Direct Portfolio Operations
Division

Contractor:

Canadian Housing and Renewal Association
251 Laurier Avenue West
Suite 401
Ottawa, Ontario
K1P 5J6

CIDN:

1467 1501001
1467 1500001

DISABLED/HANDICAPÉS

Completed Reports/Rapports terminés

Prepared by Katherine M. Boydell, Brenda M. Gladstone, Elaine S. Crawford and John N. Trainor. Ottawa: Canada Mortgage and Housing Corporation, 1996. (External Research Program).

This study examines how people with psychiatric histories feel about their neighbourhoods and highlights those neighbourhood qualities that are important to them. A focus group consisting of seven tenants living in supported housing apartment buildings was conducted to discuss the desirability of the neighbourhood. Following this, semi-structured face-to-face interviews were conducted with 60 tenants living at seven different supported housing sites in Metropolitan Toronto. Based on tenant descriptions of their neighbourhood, the seven sites were classified into three categories, twenty-two people in the middle class area, twenty in the lower-middle class area and eighteen people in the lower class area.

Tenants who participated in the focus group identified the importance of differentiating between two types of neighbourhoods: their immediate neighbourhood in the building itself and the wider neighbourhood surrounding the building. Tenants generally rated their building (immediate neighbourhood) as more appealing than the surrounding area. This was particularly true of those living in the lower-middle class and lower class categories. The majority of tenants interviewed indicated that they preferred a residential area to a commercial one. A few preferred a residential/commercial mix because of increased access to resources such as shopping and transportation.

Most tenants felt they integrated with people living in their building, that is, their immediate neighbourhood. Most tenants from all three areas also felt fairly safe within their building. Simply knowing other people in the building contributed to feelings of safety. As with integration into the surrounding area, safety in the area surrounding the building differed between middle, lower-middle and lower class. Tenants from the middle class area felt most safe; those in the lower class spoke of the crime and violence surrounding their building.

The findings of this study confirm the fact that neighbourhood characteristics are of great importance and highlight several factors that contribute to neighbourhood quality. Certain elements were common in most of the tenants' descriptions, including safety, quietness, closeness to resources and transportation. Attractive and nice homes, trees and parks were also considered important.

CONSUMER EVALUATION OF WHEELCHAIR ACCESSIBLE SOCIAL HOUSING

Objective:

Evaluate how appropriately and adequately the existing design guidelines are addressing the functional requirements of tenants with physical disabilities.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Katherine Taylor
105-1355 West 4th Avenue
Vancouver, British Columbia
V6H 3Y8

CIDN:

1637 0200001

HOUSING NEEDS OF PEOPLE WITH DISABILITIES

Objective:

To provide a profile of the housing characteristics and needs of people with disabilities using data from the 1991 Census and post-censal Health and Activity Limitations Survey (HALS).

CMHC Project Officer:

J. Angus

Division:

Social and Economic Policy and Research

Contractor:

ARK Research Associates
165 Hinton Avenue North
Ottawa, Ontario
K1Y 0Z9

CIDN:

1045 0200003

NARRATIVES ON DEDICATED AND INTEGRATED HOUSING ALTERNATIVES

Objective:

To conduct 3 focus groups (10 in each focus group) with consumers of mental health services residing in self contained units in three housing settings. These housing settings have off-site support staff.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Katherine M. Boydell
1001 Queen Street West
Queen Street Mental Health Centre
Toronto, Ontario
M6J 1H4

CIDN:

1452 0200001

SEAT RAISING DEVICES

Objective:

To develop and test prototypes of a seat raising device that will be easily transportable and which will permit access to standard chairs and other seats without concern for the limited

ability of the user to rise from a low seat.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Tetra Development Society
Suite 70
770 Pacific Boulevard South
Vancouver, British Columbia
V6B 5E7

CIDN:

1347 0200001

Completed Reports/Rapports terminés

THE CHINESE ELDERLY: SOCIAL INTEGRATION IN METRO TORONTO HOUSING COMPANY LTD.

Prepared by Morris Saldov, with the assistance of Peter C. P. Chow, Poon Kumyuen Saldov and May-Lin Poon, Ginto Enterprises Limited. Ottawa: Canada Mortgage and Housing Corporation, 1996. (External Research Program).

Demographic changes in the seniors' population in Metro Toronto Housing Company Limited (MTHCL) have resulted in large concentrations of ethnic minority elderly in some apartment buildings. The largest and fastest growing, visible minority, ethnic seniors group in Toronto is the Chinese. This study was undertaken to examine barriers to accessing housing services experienced by Chinese seniors in MTHCL. Interviews were conducted with 306 Chinese elders in nine MTHCL buildings. The majority of respondents were female, born in China, spoke only Chinese, and had a limited ability to speak and understand English. A little more than half could read Chinese.

Many housing services were identified by respondents as problematic. These included activities such as changing light bulbs, cleaning kitchen and bathroom vents, and defrosting refrigerators. The practice of tipping for MTHCL services and the uncertainty this engendered about staffs' regular duties created much confusion and concern among the Chinese elders. Chinese elders worried that unless they paid tips they would be unable to get service when needed. Seniors liked the location of their buildings, which in many cases was close to shopping and transportation. They disliked poor building maintenance, poor electrical appliances and the lack of security and day check. A few of the elders thought that the rent was too high and noise was a problem. Their suggestions for improvement included: replacement of non-self defrosting fridges; better building maintenance; Chinese-speaking staff and more provisions for security and day check.

Considerable numbers of Chinese elders did not know how to reach non-emergency services such as volunteers, doctors, homemakers and Meals on Wheels. However, most elders said that they knew how to obtain fire, ambulance or police services, by phoning 911. Many, however, were confused about how the language barrier would be handled. Approximately 25% of the elders said they did not know how to get help in an emergency.

SENIORS' HOUSING AND SOCIAL NEEDS STUDY: A PLANNING TOOL TO THE YEAR 2005: THE BEGINNING.

Prepared by Treeline Planning Services Ltd. Prepared for the N.W.T. Seniors' Advisory Committee. Ottawa: Canada Mortgage and Housing Corporation, 1995.

This report presents the results of a survey of approximately 300 seniors living in the Northwest Territories. It combines the views of seniors with the observations of service providers to create recommendations for housing and related needs to the year 2005.

This is the first study to statistically record vital information on NWT seniors. For example, seniors' income and their share of household expenses are described. Seniors' problems in personal care and daily living are outlined as well as their perceptions of their own health and well-being. The study also forecasts NWT seniors' housing needs into the next decade for the first time.

The study clearly shows that a number of problems exist for seniors which must be dealt with. Most of Northern seniors report low income. In addition, affordable and accessible housing for seniors is inadequate. Frail seniors, those most vulnerable of aged persons, are growing in numbers, and yet, care facilities are either in short supply or nonexistent in many NWT communities. These and other issues of concern to seniors are discussed in the study.

Ongoing Projects/Projets en cours

ADAPTING MUNICIPAL HOUSING FOR DEMENTIA

Objective:

To contribute to an understanding of what housing providers can do to help residents with dementia age in place.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Myra Schiff Consultants
Limited
213-110 Richmond Street East
Toronto, Ontario
M5C 2P9

CIDN:

1286 0200001

THE COMMUNITY/PRIVACY TRADE-OFF IN SUPPORTIVE HOUSING: A QUALITATIVE STUDY OF CONSUMER PREFERENCES

Objective:

Undertake two qualitative research activities, focus groups and a charrette, which will encourage consumers to express their views and preferences about environments that they consider to be supportive.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Laura C. Johnson Associates
Inc.
374 Sackville Street
Toronto, Ontario
M4X 1S5

CIDN:

1647 0200001

A GUIDE TO PLANNING, DESIGNING, DEVELOPING, MARKETING AND MANAGING HOUSING FOR OLDER CANADIANS

Objective:

To produce an easy to follow and practical guide document that will assist both non-profit groups and the private sector in planning, designing, developing, marketing and managing a wide range of housing choices for older Canadians.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and Research

Contractor:

Baycrest Centre for Geriatric Care
3560 Bathurst Street
North York, Ontario
M6A 2E1

CIDN:

0869 0200001

HOUSING OPTIONS FOR CANADIANS WITH DEMENTIA

Objective:

To produce an easy to follow, illustrated and practical guide documenting innovative housing options for people who suffer from dementia, and which is to

be titled: "Housing Options for Canadians with Dementia".

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and Research

Contractor:

Communitas Consultants
4550 Beverley Crescent
Vancouver, British Columbia
V6J 4E6

CIDN:

1251 0200001

MODÈLES D'INTERVENTION : SÉCURITÉ EN CAS D'URGENCE DES PERSONNES À MOBILITÉ RÉDUITE ET DES PERSONNES ÂGÉES EN PERTE D'AUTONOMIE VIVANT EN MILIEU RÉSIDENTIEL RÉGULIER

Objet :

Cette étude a pour objectif d'intégrer les connaissances et les réflexions actuelles concernant la problématique de la sécurité des personnes âgées et des personnes handicapées vivant en milieu résidentiel régulier, afin de les appliquer au développement de modèles d'intervention pour trois bâtiments multifamiliaux munis d'ascenseur.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Sylvie Quintin
Société d'habitations
communautaires logique inc.
3250, boulevard St-Joseph est
Montréal (Québec)
H1Y 3G2

NIC :

1460 0200001

**NEIGHBOURHOOD GROUP
HOMES: THE PLANNING,
DESIGN AND DEVELOP-
MENT PROCESS**

Objective:

To produce a number of key recommendations, guidelines, and development strategies that will shorten the learning curve for the volunteers, bureaucrats and professionals who usually develop small group homes for seniors.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Ms. Clarke and Dr. Gutman
Gerontology Research Centre
Simon Fraser University
2800 - 515 West Hastings Street
Vancouver, British Columbia
V6B 5K3

CIDN:

1453 0200001

**LA TRANSFORMATION
D'HLM POUR PERSONNES
ÂGÉES EN HLM MIXTES**

Objet :

To examine the impact on residents of the conversion of seniors low rental housing projects into mixed projects designed to include accommodation for families or low income residents under 55 years old.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

Francine Dansereau
INRS-urbanisation
3465, rue Durocher
Montréal (Québec)
H2X 2C6

NIC :

1642 0200001

**USER SATISFACTION STUDY
OF HOUSING OPTIONS FOR
OLDER CANADIANS**

Objective:

To carry out user satisfaction studies of some of the newer housing options that are currently available to older Canadians, and to produce an objective and detailed report based on the results of the research.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and
Research

Contractor:

Simon Fraser University
Gerontology Research Centre
2800-515 West Hastings Street
Vancouver, British Columbia
V6B 5K3

CIDN:

1583 0200001

**VIVRE À DOMICILE OU EN
RÉSIDENTE : UN DÉFI POUR
LES AINÉS ET LES
INTERVENANTS**

Objet:

To examine for the Saguenay region in Québec, the circumstances, constraints, limits and difficulties faced by

clients and caregiver
organizations receiving and
providing homecare services.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Danielle Maltais
555, boulevard de l'Université
Université du Québec à
Chicoutimi
Chicoutimi (Québec)
G7H 2B1

CIDN:

1641 0200001

**WORKSHOP ON HOUSING
OPTIONS FOR CANADIANS
WITH DEMENTIA**

Objective:

To increase public awareness of the range and types of housing options that are, and could be, available to Canadians with dementia, by giving prominence to information on housing, support technology, and in particular by providing information on relevant research that CMHC is currently undertaking.

CMHC Project Officer:

L. Rodriguez

Division:

Social and Economic Policy and
Research

Contractor:

Alzheimer Society of Canada
1320 Yonge Street
Toronto, Ontario
M4T 1X2

CIDN:

1591 0200001

Ongoing Projects/Projets en cours

ENERGY AUDITS OF TEN HIGH-RISE RESIDENTIAL BUILDINGS

Objective:

Determine the total energy gain and losses for ten high-rise buildings across the country. The buildings are those that have been surveyed for air leakage in the previous project "Field Investigation of Air Leakage, Air Movement and Indoor Air Quality".

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research Division

Contractor:

Scanada Consultants Limited
436 MacLaren Street
Ottawa, Ontario
K2P 0M8

CIDN:

1291 0300001

ENVIRONMENTAL IMPACT STUDY OF HOUSING-ENERGY EFFICIENCY TECHNOLOGY IMPACT

Objective:

To refine the REES program and run additional simulations of residential retrofit activities.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research Division

Contractor:

SAR Engineering Limited
8884-15th Avenue
Burnaby, British Columbia
V3N 1Y3

CIDN:

0847 0203001

INDOOR ENVIRONMENT AND ENERGY CONSUMPTION CHARACTERISTICS OF MID-RISE RESIDENTIAL BUILDINGS

Objective:

Assess the indoor environment and energy consumption on characteristics of eight mid-rise residential buildings.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research Division

Contractor:

Scanada Consultants Limited
446 Reynolds Street
Oakville, Ontario
L6J 3M4

CIDN:

1373 0200001

MONITORING OF THE ENERGY EFFICIENT APARTMENT BUILDINGS AND MECHANICAL SYSTEMS

Objective:

To carry out monitoring of the energy efficient apartment buildings and mechanical systems at 3015 Parkhill Road, Mississauga.

CMHC Project Officer:

W. Webster

Division:

Technical Policy and Research Division

Contractor:

Tatry Pathway Co-Ownership
3015 Parkhill Road
Mississauga, Ontario
L5B 4B3

CIDN:

1260 0800001

**PROGRAMME NOUVEAU
CONFORT HYDRO-QUÉBEC****Objet :**

Produire tout le matériel nécessaire aux cours de formation portant sur le Programme Nouveau confort Hydro-Québec. Organiser et donner une session de formation à l'intention des formateurs. Réviser le matériel de formation et des guides pour tous les modules en fonction de l'expérience des maisons-témoins.

Agent de projet pour la SCHL :

T. Kerwin

Division :

Division des politiques et de la recherche en matière technique

Contractant :

Le service de conseillers techniques en habitation LHW inc.
2062 Germain
Longueuil (Québec)
J4N 1L9

NIC :

1725 0300004

1725 0300002

ENVIRONMENTAL POLLUTION AND CONTROL POLLUTION DE L'ENVIRONNEMENT ET SON CONTRÔLE

Completed Reports/Rapports terminés

LA MOISSURE DANS LES SOUS-SOLS AMÉNAGÉS.

Préparé par Scanada Consultants Limited; Directeur de projet : Ken Ruest. Préparé pour la Division des politiques et de la recherche en matière technique, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1996.

D'autres recherches ont démontré que la moisissure dans les maisons a un effet négatif sur la santé des occupants. Comme certaines moisissures sont hautement toxiques, les chercheurs ont été amenés, en raison de l'intérêt manifesté pour une meilleure qualité de l'air intérieur, à essayer de trouver les causes de la croissance de moisissures dans les habitations. Le but premier de ces travaux de recherche in situ était de déterminer si les sous-sols «aménagés» types nuisent à la qualité de l'air intérieur à cause de la croissance de moisissures dans les matériaux de finition. Les cavités murales des sous-sols aménagés ont été examinés au moyen de fibrescopes. Lorsqu'on a trouvé des signes visibles de moisissures, des échantillons ont été prélevés et les espèces ont été identifiées. Les échantillons ont été pris seulement sur les surfaces atteintes et aucun échantillon d'air ambiant n'a été prélevé. Il était présumé que les moisissures trouvées dans les cavités murales contamineraient l'air de la pièce parce que les cavités murales des sous-sols ne sont pas étanches à l'air.

Des moisissures ont été trouvées dans 18 habitations et 16 d'entre elles ont fait l'objet d'un échantillonnage (les moisissures dans les deux autres sous-sols n'étaient pas liées à l'aménagement). Des moisissures aux propriétés nocives pour les humains ont été trouvées dans chacune des 16 maisons susmentionnées.

ENVIRONMENTAL POLLUTION AND CONTROL

POLLUTION DE L'ENVIRONNEMENT ET SON CONTRÔLE

Completed Reports/Rapports terminés

On a recueilli les détails de construction des murs de sous-sol de chaque maison, puis identifié les causes des problèmes d'humidité. Dans la plupart des cas, les sous-sols comportaient une ossature de bois, une isolation thermique en fibre de verre et un revêtement intérieur en plaques de plâtre. Divers types et différentes conditions d'installation ont été observés relativement aux pare-air et pare-vapeur ainsi qu'à la protection contre l'humidité. Les sources d'humidité provenaient surtout de l'extérieur, à savoir de fissures dans les fondations, des fuites de puits de fenêtre du sous-sol (window wells) d'une protection inefficace contre l'humidité de sol et du drainage inadéquat sur le périmètre, d'un nivellement inadéquat et des descentes pluviales trop près des murs de fondation. Les sources intérieures étaient les suivantes : sècheuse et salles de bains non ventilées à l'extérieur; humidité relative élevée en été; fuites de la tuyauterie de plomberie.

NOTE: Also available in English under the title: *Molds in Finished Basements*.

MOLDS IN FINISHED BASEMENTS.

Prepared by Scanada Consultants Limited; Project Manager: Ken Ruest. Prepared for Technical Policy and Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996. 2 volumes

Volume 1: Final Report

Volume 2: Appendix 1-4

Evidence from other research has shown that molds in houses have a negative impact on the occupants' health. Some molds are highly toxic and the interest in better indoor air quality is prompting researchers to determine the causes of mold growth indoors. The main objective of this field research project was to determine whether typical "finished" basements are contributing to poor indoor air quality as a result of mold growth in the finishing materials. Finished basements were investigated with optical fibrescopes to visually inspect the wall cavities. When visible signs of molds were found, samples were taken and sent for mold species identification. The mold samples were only taken from the surfaces affected and no room air samples were taken. It was assumed that the molds found in the wall cavities could contaminate the room air since the basement wall cavities are not airtight.

Molds were found in 18 houses and sampling was done in 16 of them (molds in the other two basements were not related to the finishing). In all of the 16 houses where sampling was done, molds with properties that are harmful to humans were found.

Details of the basement wall construction in each house were gathered and causes of moisture problems were identified. The majority of basements had wood framing, glass fibre insulation and drywall interior finish. A variety of types and installation conditions were observed with regards to air/vapour barriers and moisture barriers. Moisture sources were mainly from the exterior, such as from: foundation cracks; window well leaks; ineffective dampproofing and perimeter drainage; poor grading; and downspouts at foundation walls. Interior sources were from: clothes dryers and basement bathroom fans which were not vented properly to the outside; high summer relative humidity; and plumbing leaks.

NOTE : Aussi disponible en français sous le titre : *La Moisissure dans les sous-sols aménagés.*

A SURVEY OF PROBLEM HOMES OF THE ENVIRONMENTALLY HYPERSENSITIVE.

Prepared by Drerup Armstrong Ltd. Prepared for Technical Policy and Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996.

This survey dealt with field testing an inspection protocol on houses suspected of causing or aggravating symptoms of the occupants. The primary purpose of this survey was to evaluate the method of investigating the indoor air quality of houses using the protocol. The draft protocol had been previously applied to the investigation of homes of environmentally hypersensitive individuals who were experiencing difficulties with the indoor air quality (IAQ) of their homes. Fifteen houses in three regions across Canada were selected. Two survey teams based in Ontario and Nova Scotia carried out the survey. Eleven of the fifteen houses were investigated by one team member. Three houses were subjected to duplicate investigations by two team members working independently. The data gathered from two of the houses were reviewed by an external reviewer.

The survey provided an indication of the types of problems encountered in the homes. Mold and moisture were found to be the predominant problem in nine houses, while five houses had predominantly chemical contamination. One house had both types of contaminants. The moldy houses were older houses (15 to 154 years); while three of the houses with chemical contaminants were new (under ten years old). Sources of chemical contamination were identified. Pets in many of the homes and lack of ventilation were found to contribute to poor indoor air quality. In six houses, the contamination problems were severe enough to cause adverse reactions; and in one case, the investigation had to be discontinued.

The inspection checklists, which are part of the protocol, were found by the survey team to be too detailed. Improvements in the format and removal of irrelevant information was suggested. In one of the houses investigated, different concerns were identified by the two investigators inspecting the same house. In other cases, similar conclusions about the house were obtained by the two investigators, but the prioritization of remedial actions appeared to be influenced by the investigators' personal sensitivities. A need for the formal training of the investigators was identified. Such training would ensure consistent and comprehensive inspections of homes. The training would also address health issues as a result of possible exposure of the investigator to toxic contaminants.

ENVIRONMENTAL POLLUTION AND CONTROL POLLUTION DE L'ENVIRONNEMENT ET SON CONTRÔLE

Ongoing Projects/Projets en cours

ENVIRONMENTAL SKILLS REGISTER, GREEN BUILDING INFORMATION COUNCIL (GBIC)

Objective:

To develop an Environmental Skills Register (ESR) that incorporates the interests of CMHC.

CMHC Project Officer:

P. Russell

Division:

Technical Policy and Research
Division

Contractor:

Green Building Information
Council
130 Lewis Street
Ottawa, Ontario
K2P 0S7

CIDN:

1698 0300001

EVALUATION OF POLLUTANT SOURCE STRENGTHS AND CONTROL STRATEGIES IN CONVENTIONAL AND R2000 HOUSES

Objective:

Conduct a study to evaluate the pollutant source strengths and control strategies in three new conventional and three new R-2000 houses.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

Ortech International
2395 Speakman Drive
Mississauga, Ontario
L5K 1B3

CIDN:

1585 0200001

MATERIAL ODOUR EMISSIONS TEST METHODS: REVIEW AND EVALUATION ON EMISSIONS

Objective:

To evaluate the various odour emission protocols.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research
Division

Contractor:

Ortech International
2395 Speakman Drive
Mississauga, Ontario
L5K 1B3

CIDN:

1244 0201007

PASSIVE MONITORS FOR ORGANIC POLLUTANTS IN INDOOR AIR

Objective:

The study will establish the use of active carbon cloth (ACC) as a passive monitor for determining the identity and concentration of pollutants in indoor air.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Dr. Hyman D. Gesser
University of Manitoba
350 Parker Building
Winnipeg, Manitoba
R3T 2N2

CIDN:

1639 0200001

PLANNING, DESIGN AND CONSTRUCTION OF THE BARRHAVEN MULTI-UNIT HOUSING FOR THE ENVIRONMENTALLY HYPERSENSITIVE

Objective:

Prepare a report dealing with design and construction of the Barrhaven Multi-Unit Housing to provide as complete information as possible for someone wishing to learn about the project or someone intending to build a similar project.

CMHC Project Officer:

V. Salares

Division:

Technical Policy and Research
Division

Contractor:

Jools Development
General Delivery
Combermere, Ontario
K0J 1L0

CIDN:

1686 0300001

RADON BOOKLET

Objective:

To create a national version of a guidance booklet on radon, designed for both builders and householders.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research Division

Contractor:

Ken Klassen
58 Fulham Avenue
Winnipeg, Manitoba
R3N 0G2

CIDN:

1658 0200001

REVIEW OF PAINT EMISSION STUDIES USING TRADITIONAL METHODS AND RECENT CHAMBER STUDIES

Objective:

To search international databases; review studies; evaluate the significance of the findings; draft a CSIRO document; and have the document reviewed by the industry.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research Division

Contractor:

CSIRO, Australia
Graham Road
P.O. Box 56
Highett, VC 3190

CIDN:

1244 0201006

ROUND-ROBIN TESTING OF VOLATILE ORGANIC (VOC) EMISSIONS FROM COMMON BUILDING MATERIALS

Objective:

To carry out a joint research project round-robin testing of volatile organic (VOC) emissions from common building materials.

CMHC Project Officer:

J. White

Division:

Technical Policy and Research Division

Contractor:

Saskatchewan Research Council
15 Innovation Blvd.
Saskatoon, Saskatchewan
S7N 2X8

CIDN:

1244 0201008

A SURVEY OF ELECTROMAGNETIC FIELD LEVELS IN CANADIAN HOUSING

Objective:

To review the state-of-the-art in knowledge and housing research into EMF and prepare an interim report, to conduct a field survey of EMF levels in

representative housing, and to prepare a report on the findings with recommendations for remedial measures.

CMHC Project Officer:

C. Ives

Division:

Technical Policy and Research Division

Contractor:

The Planetary Association for
Clean Energy Inc.
100 Bronson Avenue
Suite 1001
Ottawa, Ontario
K1T 6G8

CIDN:

1051 0200001

FIRE PREVENTION INCENDIES -- PRÉVENTION

Completed Reports/Rapports terminés

RESULTS OF FIRE RESISTANCE TESTS ON FULL-SCALE, INSULATED AND NON-INSULATED, GYPSUM BOARD PROTECTED WALL ASSEMBLIES.

Prepared by M.A. Sultan and G.D. Lougheed, National Fire Laboratory, National Research Council Canada. Prepared for Canada Mortgage and Housing Corporation, Canadian Home Builders' Association, Canadian Sheet Steel Building Institute, Cellulose Insulation Manufacturers Association of Canada, Fiberglass Canada Inc., Forintek Canada Corporation, Gypsum Manufacturers of Canada, National Research Council of Canada and Roxul Inc. Ottawa: CMHC, 1996.

This report presents the results of 22 full-scale fire resistance tests conducted at the National Fire Laboratory on insulated and non-insulated full-scale gypsum board protected wall assemblies. Three assembly arrangements were studied: symmetrical installation 1x1 (one layer of gypsum board on both the exposed and unexposed sides), asymmetrical installation 1x2 (one layer of gypsum board on the exposed side and two layers of gypsum board on the unexposed side), and symmetrical installation 2x2 (two layers of gypsum board on each of the exposed and unexposed sides) on wood and on lightweight steel studs. Two gypsum board types, Type X and regular, were considered. The effects of resilient channel installation, insulation types, types and thicknesses of gypsum board, symmetrical and asymmetrical installation of gypsum board and stud types on the fire resistance rating of wall assemblies were investigated. The insulations tested were glass, mineral and cellulose (blown dry and wet spray) fibres.

The results of these tests showed:

Resilient Channel Effects - In the asymmetrical loadbearing assemblies (1x2) with mineral fibre insulation and resilient channels, the assembly with resilient channels installed on the double layer side provided a better fire resistance rating than the assembly with resilient channels installed on the single layer side.

Insulation Effect - In non-loadbearing (1x2) assemblies the installation of the glass fibre insulation or the cellulose fibre insulation (wet sprayed) in the wall cavity did not affect the fire resistance rating of the assembly compared to a non-insulated assembly. However, the installation of the mineral fibre insulation provided a 54% increase in the fire resistance rating. In non-loadbearing (1x2) assemblies, the width of the mineral fibre insulation batts in the wall cavity played a significant role in the fire resistance rating compared to a non-insulated assembly. An assembly with insulation installed tight between the studs provided a better fire resistance rating (100 min) than an assembly with insulation installed loose (60 min).

Effects of Gypsum Board Thickness - In loadbearing (1x2) assemblies with glass fibre insulation in the wall cavity and resilient channels located on the single layer (fire-exposed side), changing the gypsum board thickness from 12.7 mm to 15.9 mm did not improve the fire resistance rating.

Completed Reports/Rapports terminés

Effect of the Number of Gypsum Board Layers on the Exposed Side - In loadbearing assemblies with glass fibre insulation in the wall cavity and resilient channels, an assembly with double layer (2x2), 12.7 mm thick, gypsum board provided a 55% increase in the fire resistance ratings compared to a (1x2) assembly with 12.7 mm thick gypsum board.

Effect of Stud Types - In non-loadbearing (2x2) assemblies, the assemblies with wood studs provided a slightly better fire resistance rating than assemblies with steel studs. A non-loadbearing (1x1) assembly with 15.9 mm thick Type X gypsum board on steel studs provided a 52-min. fire resistance rating. A loadbearing (1x2) assembly with 12.7 mm thick Type X gypsum board with staggered wood studs on a single plate and a layer of 90 mm thick glass fibre insulation on the exposed side provided a 51-min. fire resistance rating. A loadbearing (1x1) assembly with 15.9 mm thick Type X gypsum board and a double row of wood studs on two separate plates provided a 59-min. fire resistance rating.

Ongoing Projects/Projets en cours

IT COULD NEVER HAPPEN TO ME: HIGH RISE FIRE SAFETY EDUCATION CAMPAIGN

Objective:

To develop, produce and distribute materials in support of a national high rise fire safety education campaign for use by fire service personnel and other stakeholders of fire prevention, managers of high-rise buildings, broadcasters, and the general public.

MHC Project Officer:

T. Green

Division:

Technical Policy and Research
Division

Contractor:

Carleton Productions
International Incorporated
P.O. Box 5069
Merivale Depot Broadcasting
House
3rd Floor
1500 Merivale Road
Ottawa, Ontario
K2C 3H3

CIDN:

1610 0300001

HEATING & VENTILATION CHAUFFAGE ET VENTILATION

Completed Reports/Rapports terminés

COMMENT SE CONFORMER AUX EXIGENCES DE VENTILATION DES BÂTIMENTS RÉSIDENTIELS DU CODE NATIONAL DU BÂTIMENT DE 1995.

Ottawa : Société canadienne d'hypothèques et de logement, 1996. (LNH 6452).

NOTE : Disponible par la poste : SCHL, C.P. 3077, Markham, ON, L3R 6G4,
Tél.: 1-800-668-2642. ** Prix : 12,99\$ + TPS + frais d'expédition..

Tous les logements ont besoin d'air frais pour résister à l'humidité, aux odeurs et aux polluants intérieurs. Le Code national du bâtiment (CNB) de 1995 exige que les nouveaux logements soient dotés de systèmes de ventilation mécanique pouvant fournir cet air frais. Ce manuel donne un aperçu des exigences de la Partie 9 du Code national du bâtiment (CNB) de 1995 concernant la ventilation des bâtiments résidentiels.

Les six options décrites dans ce manuel aideront les constructeurs à satisfaire aux exigences du CNB et à y voir clair. Au moins une de ces options conviendra sûrement à la plupart des logements, bien que certains pourront exiger des systèmes de ventilation sur mesure. Le manuel contient également des renseignements déterminés sur chaque option de ventilation, y compris :

- deux arbres décisionnels permettant d'aider les utilisateurs à choisir le modèle préférable
- un encart documentaire de quatre pages pour chacune des options décrites relativement à la Partie 9: les encarts décrivent les fonctions et commandes de base pour chaque système de ventilation, fournissent les données nécessaires à l'établissement des dimensions et à la sélection des composantes du système, et donnent une liste de vérification des éléments à examiner pour planifier et installer le système de ventilation.

NOTE: Also available in English under the title: *Complying with Residential Ventilation Requirements in the 1995 National Building Code.*

COMPLYING WITH RESIDENTIAL VENTILATION REQUIREMENTS IN THE 1995 NATIONAL BUILDING CODE.

Ottawa: Canada Mortgage and Housing Corporation, 1996. (NHA 6451)

NOTE: Available from: CMHC, P.O. Box 3077, Markham, ON, L3R 6G4,
Tel.: 1-800-668-2642. ** Price: \$12.99 plus GST and handling charges.

All dwellings require fresh air to deal with moisture, odours and indoor pollutants. The 1995 National Building Code (NBC) requires that new dwellings have mechanical ventilation systems capable of providing this fresh air. This manual provides an overview of the ventilation requirements for residential buildings falling under Part 9 of the 1995 National Building Code (NBC).

The six system options described in this manual will help builders meet the NBC requirements with a minimum of confusion. One or more of these ventilation system options will be suitable for most dwellings, although some dwellings may require custom designed ventilation systems. The manual also contains specific information on each ventilation

system option, including:

- Two Ventilation System Decision Trees to help users determine which ventilation system design approach to use
- A four-page information pull-out for each of the Part 9 ventilation system options described. The pull-outs describe the basic functions and controls for each ventilation system, provide data needed to size and select ventilation system components, and give a checklist of items for consideration when planning and installing the ventilation system.

NOTE : Aussi disponible en français sous le titre : *Comment se conformer aux exigences de ventilation des bâtiments résidentiels du Code national du bâtiment de 1995.*

HEATING & VENTILATION CHAUFFAGE ET VENTILATION

Ongoing Projects/Projets en cours

CONTRÔLE PERFORMANT DES SYSTÈMES DE VENTILATION ET DE L'HUMIDITÉ DANS LES RÉSIDENCES

Objet :

Propose and evaluate a control strategy and controlling equipment for ventilation systems with or without heat recovery capabilities.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

Pierre Hosatte
7744, Sherbrooke Est
Bureau 204
Montréal (Québec)
H1L 1A1

NIC :

1635 0200001

DEVELOPMENT OF CONSUMER ADVISORY DOCUMENTS FOR RESIDENTIAL HEAT RECOVERY VENTILATORS

Objective:

Develop consumer advisory documents for residential heat recovery ventilators.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

Galbraith Communications
Suite 200
440 Laurier Avenue West
Ottawa, Ontario
K1R 7X6

CIDN:

1584 0200001

DEVELOPMENT TESTING AND PROVING OF CHINOOK ADVANCED EARTH ENERGY HEAT PUMP

Objective:

To complete the design and drawings of the Hotspring water to water series and the electrical and electronic controls for both series and make them CEBus and Smart Houses compatible.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Chinook Phi Beta Corporation
5480 Canotek Road
Ottawa, Ontario
K1J 9H7

CIDN:

0943 0200001

HEATING & VENTILATION CHAUFFAGE ET VENTILATION

Ongoing Projects/Projets en cours

DEVELOPMENT TESTING AND PROVING OF CHINOOK ADVANCED GAS-FIRED HYDRONIC AIR HANDLER

Objective:

To complete and test the prototype. Field testing and demonstration to take place at the Advanced Houses using prototypes and at several sites using reproduction units in standard market installation configurations. All these installations to be monitored and reported upon and the results used to improve the production units.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Chinook Phi Beta Corporation
5480 Canotek Road
Ottawa, Ontario
K1J 9H7

CIDN:

1072 0200001

DRAIN GAIN

Objective:

To test and evaluate the drain gain, a waste water heat recovery exchanger and storage device aimed at the residential market.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Winston MacKelvie
Box 1156
Knowlton (Québec)
J0E 1V0

CIDN:

1443 0200001

FIELD STUDY OF OCCUPANT INTERACTIONS AND VENTILATION EFFECTIVENESS OF HEAT RECOVERY VENTILATION SYSTEMS

Objective:

To conduct a field study of occupant interactions and ventilation effectiveness of heat recovery ventilation systems.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

Buchan Lawton Parent Limited
30 East Beaver Creek
Suite 210
Richmond Hill, Ontario
L4B 1G6

CIDN:

1376 0200001

HVAC DESIGN AND INSTALLATION PRACTICES IN MID AND HIGH-RISE BUILDINGS

Objective:

To conduct a study to evaluate the changes required to existing HVAC design and installation practices in mid and high-rise buildings in order to ensure compliance with the 1995 National Building and Energy

Codes and to study the performance of ventilation systems within these types of buildings.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

Sheltair Scientific Ltd.
#2 - 3661 West 4th Avenue
Vancouver, British Columbia
V6R 1P2

CIDN:

1424 0200001

IDENTIFYING AND REMOVING POLLUTANTS FROM HEAT RECOVERY VENTILATORS

Objective:

Determine whether dedicated ventilation systems harbour unhealthy levels of dust, mould and/or fungi; whether existing duct cleaning methods are successful at lowering those levels; and to develop recommendations and guidelines for builders and homeowners for the maintenance of dedicated residential systems.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Terry Watters
Rural Route #3
Comp 308
Wolfville, Nova Scotia
B0P 1X0

CIDN:

1652 0200001

INVESTIGATE HEATING AND VENTILATING SYSTEMS FOR REMOTE HOUSING

Objective:

To conduct a study to investigate heating and ventilating systems for remote housing.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research Division

Contractor:

Howell-Mayhew Engineering Inc.
15006-103 Avenue
Edmonton, Alberta
T5P 0N8

CIDN:

1481 0200001

OPERATING MECHANICAL AND ELECTRICAL EQUIPMENT AND SYSTEMS IN MEDIUM & HIGH-RISE RESIDENTIAL BUILDINGS

Objective:

Develop reference documents and training materials for operating mechanical and electrical equipment and systems in medium and high-rise residential buildings.

CMHC Project Officer:

W. Webster

Division:

Technical Policy and Research Division

Contractor:

Efficiency Engineering Incorporated
887 Langs Drive
Suite 2
Cambridge, Ontario
N3H 5K4

CIDN:

1250 0200001

OPTIMIZE RESIDENTIAL HVAC DUCTWORK SYSTEMS

Objective:

To conduct a study to assess the potential to optimize residential HVAC ductwork systems.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research Division

Contractor:

Allen Associates
400 Mount Pleasant Road
Suite 5
Toronto, Ontario
M4S 2L6

CIDN:

1431 0200001

OVERHEATING AS A FACTOR IN HOUSE DESIGN

Objective:

To create the tools for providing advice to house designers on the subject of overheating.

CMHC Project Officer:

F. Grammenos

Division:

Technical Policy and Research Division

Contractor:

SAR Engineering Limited
8884-15th Avenue
Burnaby, British Columbia
V3N 1Y3

CIDN:

1567 0200001

HEATING & VENTILATION CHAUFFAGE ET VENTILATION

Ongoing Projects/Projets en cours

PERFORMANCE QUANTIFICATION ON SINGLE WELL HEAT PUMP

Objective:

To quantify the performance of an existing open loop ground source heat pump system which uses a single domestic water well for both its supply and discharge requirements, and to demonstrate that a single well can be used as both the supply and discharge source for open loop ground water heat pump systems.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Bob Vasily and Associates
RR #1
Seeley's Bay, Ontario
K0H 2N0

CIDN:

1267 0200001

POÊLES À BOIS ET QUALITÉ DE L'AIR INTÉRIEUR

Objet :

Comparer la qualité de l'air intérieur entre des maisons de la région de Québec utilisant un poêle à bois comme source de chauffage à d'autres habitations qui n'en utilisent pas.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

Benoît Lévesque
Médecin-conseil en santé
environnementale
Centre de santé publique de
Québec
2050, boulevard René-Lévesque
Ouest
Sainte-Foy (Québec)
G1V 2K8

NIC :

1459 0200001

RENOVATION AND VENTILATION: A SURVEY OF CONTRACTOR AWARENESS OF VENTILATION ISSUES

Objective:

To conduct a study to examine contractors' awareness of healthy housing issues and to identify industry information needs and technology transfer opportunities.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

Reid/Foster Associates
654 MacLaren Street
Ottawa, Ontario
K1R 5L2

CIDN:

1538 0300001

SUPPORT FOR THE HEAT EXCHANGER LEAKAGE STUDY

Objective:

To carry out "support for the heat exchanger leakage study".

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research
Division

Contractor:

Geddes Enterprises
45 Massey Street
Brampton, Ontario
L6S 2V8

CIDN:

1505 0200002

TECHNICAL REVIEW OF THE DEVELOPMENT OF CONSUMER HEAT RECOVERY VENTILATION ADVISORY DOCUMENTS

Objective:

Provide technical review of consumer directed, heat recovery advisory documents. Provide a written commentary on materials.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

Air Solutions Inc.
44 Darren Crescent
Cambridge, Ontario
N3C 3Y1

CIDN:

1584 0201001

**WEATHER DATA FOR
SOLAR HEATING
APPLICATIONS**

Objective:

To generate a base of climatic data that can be used to analyse and evaluate the performance of passive solar dwellings.

CMHC Project Officer:

W. Webster

Division:

Technical Policy and Research
Division

Contractor:

Environment Canada Climate
and Water Information Branch
4905 Dufferin Street
Downsview, Ontario
M3H 5T4

CIDN:

1745 0300001

**HIGH-RISE CONSTRUCTION
CONSTRUCTION D'IMMEUBLES DE GRANDE HAUTEUR**

Completed Reports/Rapports terminés

**ASSESSMENT REPAIR STRATEGY FOR EXISTING BUILDINGS
CONSTRUCTED WITH MASONRY VENEER STEEL STUD WALLS.**

*Prepared by T.W.J. Trestain. Prepared for Technical Policy and Research Division,
Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996.*

Canada Mortgage and Housing Corporation (CMHC) retained T.W.J. Trestain Structural Engineering to undertake a review of assessment and repair techniques for problem masonry veneer steel stud (MV/SS) walls. This document is intended to define state-of-the-art "good practice", a needed reference point upon which evaluations of deficiencies, renovation strategies and construction methods can be based.

Two competing approaches to field investigation are discussed - the medical model versus the technical audit model. Neither approach is sufficient on its own and a blended model is therefore proposed. Methods of gathering field information are discussed including a proposed systematic approach to the review of problem MV/SS walls. The successful diagnosis(es) of problem MV/SS walls requires an understanding of the basic engineering and building science issues. Accordingly, typical MV/SS deficiencies and the consequences associated with those deficiencies are presented.

In order to assist the investigator to answer the question "Is it good enough?", a number of analysis tools are proposed along with some suggested decision making criteria. The analysis tools include reduced Limit States Design load factors, conventional analysis, finite element analysis and full-scale field testing. The basic analysis routine for the finite element program was developed as part of another CMHC project and then customized with a number of features specifically for this project. Lastly, a compendium of possible maintain or restore strategies is presented for problem MV/SS walls. Included is a section on economic analysis which provides guidance on the optimum course of action that best meets the needs of public safety, building performance and the financial position of the building owners.

HIGH-RISE CONSTRUCTION CONSTRUCTION D'IMMEUBLES DE GRANDE HAUTEUR

Completed Reports/Rapports terminés

COMMISSIONING PLAN FOR THE BUILDING ENVELOPE: REPORT.

Prepared by Morrison Hershfield Limited. Prepared for Housing Innovation Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.

Inadequate building envelope performance associated with air leakage, vapour diffusion, water leakage and poor thermal performance has substantial consequences for building owners and users. Energy costs increase, user comfort decreases and the owner's repair and capital replacement budgets soar. Commissioning the building envelope can help control these consequences. The term commissioning, understood by many to be a process which starts at the completion of a project has been modified significantly. In this report, the commissioning plan extends the building envelope commissioning process from the project brief, through validation of the design, to progressive certification during and possibly following construction. Each section of the plan is followed by an example based on the development of a building envelope for a twenty-storey brick and steel stud residential building in Ottawa.

At the project brief stage, the owner must define clear performance requirements for the building envelope. The project design team responds with a progression of validated details from concept to final tender documents which ensures that the performance specified in the project brief can be achieved, if constructed as specified. During construction, progressive certification of the performance of critical materials, components and assemblies is required to assure that the project, as constructed, meets the same performance requirements. At completion, the building envelope may or may not be commissioned as a whole.

Throughout the building envelope commissioning process, from project brief to final construction, the design team requires the guidance of an individual to define initial performance objectives, complete design validation assessments and witness performance tests during and following construction. This individual may be the project architect or another specialist retained by the design team to assume these responsibilities.

NOTE : Aussi disponible en français sous le titre : *Plan de mise en service de l'enveloppe du bâtiment.*

CONTROLLING STACK PRESSURE IN HIGH-RISE BUILDINGS BY COMPARTMENTING THE BUILDING: REPORT.

Prepared by Morrison Hershfield Limited. Prepared for High-Rise Innovation Centre, Technical Policy and Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996.

An investigation was conducted of the effect of decreasing the air leakage area across internal partitions of a typical modern high-rise apartment. The objective of this work was to study the practicality of increased compartmentalization or separation of the living units from each other and from the corridors and vertical shafts in the building. A 12-storey condominium building in Nepean, Ontario was selected as the test case for the measurements. Measurements of pressure difference across 18 different partitions in the building were made under cold weather conditions, with doors across some of the separations opened and make-up air fans either operating or switched off. A total of 20 measurement sets are presented. The airflow rates through the make-up air vents on each corridor were also measured. A computer simulation model of the airflow network within the building was developed using the CONTAM93 program. The simulation model was calibrated so that the simulated pressures and airflow matched those measured in the building.

The doors were determined to represent the element of the interior partitions which could be improved most reliably and simply. It was felt that the best modern technology could produce interior doors providing 1/4 the leakage of the tightest doors commonly found in high-rise residential buildings. The effect of installing such tight doors in existing buildings was simulated. Three compartmentalization strategies were simulated, as follows: separating the units from the corridors, separating the corridors from the vertical shafts, and a combination of the first two. Separating the units from the corridors was found to have greater effects than separating the corridors from the shafts, but the combination of the two measures was nearly additive and created the greatest differences from the base case in air movement and pressure differences across building elements.

Pressure differences across interior doors were increased by compartmentalization, while pressure differences across the exterior skin were reduced but not as much as expected. The combination strategy spread pressure differences across greater numbers of partitions, so that the peak pressure differences across interior doors were smaller with this strategy than the other two. Unit ventilation is more uniform under compartmentalization. Units on lower floors receive more total air and more of their air from the corridor, with essentially none from infiltration. Units on upper floors receive less total ventilation, and a greater proportion of their air is from the corridor ventilation system; virtually none is from the garage via elevator shafts and stairwells.

Total air leakage and airflow through the corridor ventilation system is reduced by up to 14% by the combination strategy. Peak loads and required heating and cooling capacities are reduced by the same amount. The existing corridor ventilation fans were found to provide more than enough building pressurization, and corridor ventilation flow rates could be further reduced without much impact on the benefits of compartmentalization.

HIGH-RISE CONSTRUCTION CONSTRUCTION D'IMMEUBLES DE GRANDE HAUTEUR

Completed Reports/Rapports terminés

HIGH-RISE APARTMENT REPAIR NEEDS ASSESSMENT.

Prepared by Gerald R. Genge and Jacques Rousseau. Prepared for High-Rise Innovation Centre, Technical Policy and Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996.

In a study performed for the City of Toronto on high-rise rental buildings, a different approach was used to evaluate the probable costs for repair. In order to understand the scope of the repair needs and the overall costs for the population of 464 high-rise rental properties, a typology approach to repair needs was established. On the basis of the consultant's experience and recognizing that certain aspects of design resulted in certain typical repair requirements, buildings of different age groups were characterized and expected repair needs were assessed. From this, costs were applied and aggregate expenses were computed. The costs were assessed in terms of the initial costs to bring buildings back to a satisfactory level of performance and then the expected ongoing costs for maintaining buildings at that level.

The characteristics found to most influence the repair costs were associated with specific elements of the building. In particular: cladding, windows, roofs, balconies, garage and exposed structural elements tended to dictate the level of expenditure. Other items, such as elevator control modernization, heating system retrofits and replacement of domestic water systems were also included when appropriate; however, the cost of these items did not affect the overall costs to the same degree as the envelope issues.

NOTE : Aussi disponible en français sous le titre : *Réparation des tours d'habitation.*

PLAN DE MISE EN SERVICE DE L'ENVELOPPE DU BÂTIMENT.

Préparé par Morrison Hershfield Limited. Préparé pour la Division de l'innovation dans l'habitation, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1995.

Le rendement inadéquat de l'enveloppe d'un bâtiment, accompagné de fuites d'air, de diffusion de vapeurs, de fuites d'eau et d'une faible résistance thermique, a de graves conséquences pour le propriétaire et les utilisateurs de ce bâtiment. Les coûts de l'énergie augmentent, le confort des utilisateurs diminue et le propriétaire voit grimper ses budgets de réparation et de remplacement d'immobilisations. La mise en service de l'enveloppe du bâtiment peut aider à modérer ces conséquences.

Le terme de «mise en service», que plusieurs comprennent comme un processus qui commence à l'achèvement d'un projet, a été considérablement modifié. Dans ce rapport, le plan de mise en service prolonge le processus de mise en service de l'enveloppe du bâtiment à partir de l'avant-projet, en passant par la validation de la conception et jusqu'à l'homologation progressive pendant la construction et peut-être après l'achèvement. Chaque section du plan est suivi d'un exemple basé sur la production d'une enveloppe de bâtiment pour un immeuble résidentiel de 20 étages en briques et en poteaux d'acier situé à Ottawa.

À l'étape de l'avant-projet, le propriétaire doit clairement définir les exigences de rendement de l'enveloppe du bâtiment. L'équipe de conception du projet répond à ces critères en produisant des détails qui sont validés graduellement, depuis l'avant-projet jusqu'aux documents d'offre finale, et permettent de s'assurer que le rendement défini au moment de l'avant-projet peut être atteint si le bâtiment est construit tel que précisé. Pendant la construction, il est nécessaire d'assurer l'homologation progressive du rendement des matériaux, éléments et assemblages principaux, afin de s'assurer que le projet tel que construit est conforme aux exigences de rendement indiquées. À l'achèvement de la construction, l'enveloppe pourra être mise en service en totalité ou non.

Pendant tout le processus de mise en service de l'enveloppe du bâtiment, de l'avant-projet à la construction finale, l'équipe de conception doit avoir recours aux directives d'un spécialiste qui définira les objectifs de rendement initiaux, réalisera les évaluations de validation de la conception et assistera aux essais de rendement pendant et après la construction. Cette personne peut être l'architecte responsable du projet, ou tout autre spécialiste dont les services ont été retenus à cette fin par l'équipe de conception.

NOTE: Also available in English under the title: *Commissioning Plan for the Building Envelope: Report*.

RÉPARATION DES TOURS D'HABITATION.

Préparé par Gérald R. Genge et Jacques Rousseau. Préparé pour le Centre d'innovation pour les tours d'habitation, Division des politiques et de la recherche en matière technique, Société canadienne d'hypothèques et de logement. Ottawa: SCHL, 1996.

Dans une étude effectuée pour le compte de la ville de Toronto à l'égard des tours d'habitation, on a utilisé une démarche différente pour évaluer les coûts probables de réparation. En effet, on a établi une typologie des besoins en matière de réparation, pour comprendre l'ampleur de ces besoins et les coûts globaux pour le parc de 464 tours d'habitation. En se fondant sur l'expérience des experts-conseils et en prenant acte du fait que certains aspects de la conception présentaient des exigences types en ce qui concerne les réparations, on a cerné les caractéristiques des bâtiments de divers groupes d'âge et évalué les besoins prévisibles en matière de réparation. À partir de ces données, des coûts ont été appliqués et les dépenses cumulatives ont été calculées. Les coûts ont été évalués à l'origine pour remettre les bâtiments dans un état de rendement satisfaisant, puis on a déterminé combien il en coûterait pour conserver les bâtiments à ce niveau.

Les caractéristiques qui influaient le plus sur les coûts de réparation ont été reliées à des éléments précis du bâtiment. Plus particulièrement, le revêtement mural extérieur, les fenêtres, les toits, les balcons, le garage et les éléments de charpente apparents avaient tendance à dicter le niveau de dépenses. D'autres aspects, comme la modernisation des commandes des ascenseurs et la rénovation des systèmes de chauffage ainsi que le remplacement des réseaux de distribution d'eau domestique ont également été inclus le cas échéant; cependant, leur coût a moins influencé les coûts globaux que ceux ayant trait à l'enveloppe des bâtiments.

NOTE: Also available in English under the title: *High-Rise Apartment Repair Needs Assessment*.

HIGH-RISE CONSTRUCTION CONSTRUCTION D'IMMEUBLES DE GRANDE HAUTEUR

Ongoing Projects/Projets en cours

ANALYSIS OF OPERATING EXPENDITURES IN PRIVATE SECTOR RESIDENTIAL HIGH-RISE BUILDINGS

Objective:

To develop operating cost profiles for the limited sample of private sector cost data received from the industry associations BOMA and REIC and make comparisons with social housing data previously obtained.

CMHC Project Officer:

W. Webster

Division:

Technical Policy and Research
Division

Contractor:

Ark Research Associates
165 Hinton Avenue North
Ottawa, Ontario
K1Y 0Z9

CIDN:

1024 0200004

COMPARTMENTALIZATION OF EXISTING HIGH-RISE APARTMENT BUILDINGS

Objective:

Determine the practicality of compartmentalizing existing apartment buildings and determining the effectiveness of compartmentalization on controlling unwanted air change, energy costs and comfort problems.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Mark Lawton Building Science
Specialists and
Morrison Hershfield Limited
2440 Don Reid Drive
Ottawa, Ontario
K1H 8P5

CIDN:

1655 0200001

CONDITION SURVEY OF HIGH-RISE STOCK

Objective:

Establish a research and survey design methodology for assessing the physical condition and state of repair, including the costs of upgrading to extend the longevity, of the high-rise rental housing stock, and to conduct a statistically valid sample survey of that stock in the City of Toronto.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

Contractor:

Corporation of the City of
Toronto
City Hall
100 Queen Street West
Toronto, Ontario
M5H 2N2

CIDN:

1561 0300001

DESIGN AND IMPLEMENTATION OF INNOVATIONS AT COLOMBUS HOUSE SHERWOOD PARK, NEAR EDMONTON, ALBERTA

Objective:

Design conception and implementation of the innovations to be integrated into Columbus House, a high-rise residential building that will be constructed in Sherwood Park, near Edmonton, Alberta.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research
Division

Contractor:

Howell-Mayhew Engineering
Inc.
15006-103 Avenue
Edmonton, Alberta
T5P 0N8

CIDN:

0840 0302005

**EVALUATION OF
POLLUTANT SOURCE
STRENGTHS AND CONTROL
STRATEGIES IN AN
INNOVATIVE HIGH-RISE
RESIDENTIAL BUILDING**

Objective:

To evaluate the pollutant source strengths and control strategies in an innovative residential high-rise building.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division
Panel on Energy Research and
Development

Contractor:

SIRICON
1455 Boulevard Maisonneuve
Ouest
Montréal, Québec
H3G 1M8

CIDN:

1557 0200001
1557 0300001
1557 0800001

**HEAT, AIR AND MOISTURE
TRANSFER IN HIGH-RISE
BUILDING ENVELOPES**

Objective:

Analysis of the hygrothermal behaviour of residential building components and document the results in a final report.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

National Research Council
Canada
Institute for Research in
Construction
Building M-20
1200 Montreal Road
Ottawa, Ontario
K1A 0R6

CIDN:

0719 0200001

**MONITOR THE
PERFORMANCE OF A
HIGH-RISE RESIDENTIAL
BUILDING ENVELOPE
RETROFIT**

Objective:

To study the impact of retrofits on the heat, air and moisture transport characteristics of newly renovated envelopes.

CMHC Project Officer:

D. Hill

Division:

Technical Policy and Research
Division

Contractor:

Morrison Hearshfield Building
Science Specialists
2440 Don Reid Drive
Ottawa, Ontario
K1H 8P5

CIDN:

1602 0800001

**PERFORMANCE
CONTRACTING IN
MULTI-UNIT RESIDENTIAL
BUILDINGS**

Objective:

Validate the opportunities and effectiveness of energy and water performance contracting in the multi-unit residential sector.

CMHC Project Officer:

W. Webster

Division:

Technical Policy and Research
Division

Contractor:

Alan Levy Consulting
48 Reeve Drive
Markham, Ontario
L3P 6B9

CIDN:

1560 0200001

HOME OWNERSHIP HABITATIONS -- POSSESSION

Completed Reports/Rapports terminés

LITERATURE REVIEW ON THE TENURE DECISION OVER THE LIFE CYCLE.

Prepared by Marion Steele and Gillian Leslie. Prepared for the Centre for Future Studies in Housing and Living Environments, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996.

The objective of this research is to do a literature review of the theoretical and empirical studies on the life cycles tenure decision. The project consists of an analysis of documents published in the last decade that deal with the question of life cycle and tenure decision in Canada. As the size of this literature survey (32) makes clear, there are a large number of studies in existence which deal with tenure choice over the life cycle. Most of these focus on the general issue of tenure choice but include some discussion of life cycle effects. Some do this by including demographic variables such as the age and the marital status of the household head and the number of children in their model. Others confine the analysis to specific demographic groups, most often young households. Some estimate the model separately for different demographic groups.

Generally the findings are:

- Age has, at first, a very strong positive effect on the probability of being an owner, with the effect of an additional year of age declining as the household gets older, where the sample is all households.
- On the cohort effect, it has been found that the experience of a household in earlier periods will substantially affect its tenure choice in the current period. Thus, it seems likely that the homeownership rate for households less than 25 years will never rise to the levels seen in the 1970s, partly because of the large numbers attaining post-secondary education and delaying entry into the labour market.
- Heads who are not married have a substantially lower probability of homeownership than married heads. The reduced probability appears to be particularly great for young single women.
- The presence of children, or the number of children has a strong effect on the probability of homeownership for young households, an effect which is robust to different specifications.
- Income is generally found to have much more impact on the homeownership of young households than on that of older households.

IDENTIFYING THE IMPEDIMENTS TO BUYING A HOUSE

Objective:

To conduct a survey of people searching for houses. The survey will ask questions about the duration of time already spent searching; the number of houses inspected without selecting one of them; ... etc.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Dr. Paul Anglin
Associate Professor
University of Windsor
Department of Economics
401 Sunset Avenue
Windsor, Ontario
N9B 3P4

CIDN:

1650 0200001

HOUSE CONSTRUCTION HABITATIONS -- CONSTRUCTION

Completed Reports/Rapports terminés

PARE-AIR RIGIDE.

Préparé par Mario V. Petrone. Projet réalisé dans le cadre du Programme de subventions de recherche. Ottawa : Société canadienne d'hypothèques et de logement, 1995.

Le Code national du bâtiment du Canada 1990 exige la mise en oeuvre d'un système d'étanchéité à l'air efficace pour empêcher l'infiltration et l'exfiltration d'air au travers de l'enveloppe des bâtiments. Par ailleurs, le comité associé du Code national du bâtiment a établi, comme objectif pour l'édition du CNB 1995, de réviser la section traitant de l'étanchéité à l'air afin d'y inclure des critères quantitatifs. À l'heure actuelle, on exige donc des concepteurs et constructeurs de réaliser des bâtiments étanches à l'air. D'ici peu, les concepteurs devront parfaire leurs connaissances en étanchéité à l'air afin d'être en mesure de réaliser des systèmes pare-air rencontrant certains niveaux d'étanchéité et de résistance structurale définis par le code.

Cette étude a donc pour objet de familiariser les concepteurs et les constructeurs à un système de pare-air s'appliquant aux murs de bâtiments et permettant de rencontrer efficacement les divers niveaux d'exigence du code. Ce système, appelé pare-air rigide, est composé de panneaux rigides apposés sur les murs. Ces panneaux doivent être étanches à l'air et doivent résister aux mouvements du bâtiment ainsi qu'aux différentiels de pression entre l'intérieur et l'extérieur. Les panneaux rigides sont eux-mêmes pare-air mais les joints ne le sont pas. Un matériau différent doit donc être utilisé pour réaliser l'étanchéité des joints. Des stratégies doivent être développées afin de réaliser l'étanchéité aux joints des éléments de nature différente, telles que les fenêtres et autres systèmes.

Ce rapport propose une série de détails de construction qui décrivent les méthodes d'assemblage des différentes composantes du système pare-air rigide. Chaque série de détails est applicable à une typologie de bâtiment particulière, qu'il s'agisse de bâtiment à structure de béton, de bois ou d'acier, de rénovation ou de construction neuve.

NOTE: Also available in English under the title: *Rigid Air Barrier Assemblies*

HOUSE CONSTRUCTION

HABITATIONS - - CONSTRUCTION

Completed Reports/Rapports terminés

PROOF OF CONCEPT: DEVELOPMENT AND TESTING OF THE BIOCRETE HOUSE CONSTRUCTION SYSTEM.

Prepared by R.E. Platts, Scanada Consultants Limited. Ottawa: Canada Mortgage and Housing Corporation, 1996. (Housing Technology Incentives Program).

Turning "waste" organic fibre such as forest and construction wood wastes into sound, affordable housing is an attractive idea. Using just such wastes, Internatural Canada has demonstrated successfully that their "Bioblock-Biocrete" concept can readily produce exterior walls that are technically sound and should offer very low costs; further, the concept could well be extended to produce vaulted wall-roofs comprising much more of the house envelope. The Internatural team developed a production approach and prototype "blockmaker" for producing dry-compacted "Bioblock" composites; produced a viable variety of prototypical Bioblocks, primarily using shredded forest canopy and construction lumber wastes for proof-of-concept purposes; built structural sandwich walls (using just unreinforced cement-lime stucco to substitute for the variety of soil-fibre-cement "Biocrete" skins that are attainable); and structurally tested the components and the whole.

The prototyping of components and assemblies also afforded insights into production, construction and cost considerations, including construction methods, and stability and safety issues before the structural skins are applied and cured. Even at this first prototype stage - more akin to mock-up than prototype in several aspects - the system's overall structural and general feasibility for housing production has been demonstrated successfully. Stiffness and strength were shown to greatly exceed that of common wood frame construction. No crucial drawbacks are seen. However, immediate opportunities for improvement are clear: mesh choices for lower cost, the types and application methods of the Biocrete skin, as well as the size and shape of particles used in Bioblocks to achieve better thermal values. Detailing to avoid moisture accumulation and ensure durability will be vitally important. As well, it will be necessary to ensure that issues such as fire propagation characteristics are addressed.

RIGID AIR BARRIER ASSEMBLIES.

Prepared by Mario V. Petrone. Ottawa: Canada Mortgage and Housing Corporation, 1995. (External Research Program).

The National Building Code of Canada 1990 requires the installation of an effective air barrier system to prevent infiltration and exfiltration of air through the building envelope. Moreover, the Associate Committee on the National Building Code set, as an objective for the NBCC 1995 edition, to revise the section dealing with airtightness to include quantitative criteria. At the present time, designers and builders are being required to produce airtight buildings. Shortly, designers will have to hone their knowledge of airtightness to be in a position to produce air barrier systems which respect certain airtightness and structural resistance criteria as set forth in the Code.

HOUSE CONSTRUCTION HABITATIONS -- CONSTRUCTION

Completed Reports/Rapports terminés

This study was thus undertaken to familiarize designers and builders with an air barrier system for building walls making it possible to effectively respect the various requirements of the Code. This system, referred to as a rigid air barrier system, is made up of rigid panels applied to the walls. These panels must be airtight and must resist any building movements and pressure differentials between the outside and inside. The rigid panels themselves are air barriers but the joints are not. A different material must thus be used to render the joints airtight. Strategies must be developed to make the joints formed by disparate elements airtight : air barrier + windows, etc.

This report proposes a series of construction details specifying the procedures for assembling the various components. Each series of details is applicable to one building type, whether this be a concrete, wood, steel, renovation, or new structure.

NOTE : Aussi disponible en français sous le titre : *Pare-air rigide*.

Ongoing Projects/Projets en cours

DEVELOPMENT OF COMMERCIALLY VIABLE CONCEPTS AND A DESIGN FOR A RESIDENTIAL FRAMING SYSTEM FOR A MONOCOQUE HOUSE

Objective:

To undertake the development of commercially viable concepts and a design for a residential framing system for a monocoque house, to provide on-site guidance during the construction of prototypes of the design and to undertake post construction performance monitoring of the structures.

CMHC Project Officer:

R. Duncan

Division:

Technical Policy and Research
Division

Contractor:

Gower, Yeung & Associates
615 Eighth Street
Suite 201
New Westminster, British
Columbia
V3M 3S3

CIDN:

0657 0300001

DEVELOPMENT OF THE EARTHQUAKE RESISTANT DESIGN PUBLICATION

Objective:

To prepare a manuscript including footnoted references and a supplementary readings list. The final book will be published in soft cover format, with illustrations and photographs.

CMHC Project Officer:

T. Marshall

Division:

Technical Policy and Research
Division

Contractor:

Pro Pacific Architecture Ltd.
12440 Alma Street
Vancouver, British Columbia
V6R 3R7

CIDN:

1355 0301001

ENVIRONMENTAL SUSTAINABILITY: IMPEDIMENTS TO CONSTRUCTION WASTE REDUCTION IN ONTARIO

Objective:

Examine past and existing initiatives and determine the most successful waste minimization practices. Create a tool to facilitate education and stimulate widespread implementation of waste reduction practices.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Teresa Paul
Habitat Associates
55 Cambridge Street
Guelph, Ontario
N1H 2V1

CIDN:

1653 0200001

HOUSE CONSTRUCTION HABITATIONS -- CONSTRUCTION

Ongoing Projects/Projets en cours

HOUSING DE-CONSTRUCTION

Objective:

To investigate and carry out a de-construction procedure on a house to make it more economically and environmentally viable compared to current housing demolition practices.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

Vince Catalli
Design Consultants
2-417 Bronson Avenue
Ottawa, Ontario
K1R 6J6

CIDN:

1439 0200001

AN INFORMATION AND TRAINING NEEDS ANALYSIS FOR THE CANADIAN HOME INSPECTION INDUSTRY

Objective:

Undertake and complete "An Information and Training Needs Analysis for the Canadian Home Inspection Industry."

CMHC Project Officer:

T. Marshall

Division:

Technical Policy and Research Division

Contractor:

Energy Technology Access Group Inc.
2308 Arlington Avenue
Saskatoon, Saskatchewan
S7L 3L3

CIDN:

1539 0300001

SERVICEABILITY OF FLOORS BUILT WITH WOOD I - JOISTS AND CONCRETE TOPPING

Objective:

Evaluate the changes in floor stiffness and vibration characteristics before and after the addition of a concrete topping to floor systems constructed with wood I - joists and a wood-based flooring.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Dr. Ying Hei Chui
Associate Professor
University of New Brunswick
P.O. Box 44555
Fredericton, New Brunswick
E3B 6C2

CIDN:

1651 0200001

STUDY OF SEAM TELEGRAPHING PROBLEMS IN RESIDENTIAL FLOORING

Objective:

Identify and determine what can be done to minimize the seam telegraphing problems in residential flooring currently being experienced by the housing industry across Canada.

CMHC Project Officer:

T. Marshall

Division:

Technical Policy and Research Division

Contractor:

Canadian Home Builders' Association
150 Laurier Avenue West
Suite 200
Ottawa, Ontario
K1P 5J4

CIDN:

1729 0300001

SURVEY OF BUILDING ENVELOPE FAILURES IN WOOD FRAME BUILDINGS IN THE COASTAL CLIMATE AREA OF BRITISH COLUMBIA

Objective:

Produce a study of the causes, and contributory factors resulting in the decay and deterioration of 3 & 4 storey wood frame residential buildings in the coastal climate area of British Columbia.

CMHC Project Officer:

J. Rousseau

Division:

Technical Policy and Research Division

Contractor:

Morrison Hershfield Ltd.
#247-4229 Canada Way
Burnaby, British Columbia
V5G 1H3

CIDN:

1569 0300001

URBAN SELF-BUILD DEMONSTRATION

Objective:

To determine the viability of the self-build housing assistance option in an urban setting.

CMHC Project Officer:

D.A. Stewart

Division:

Policy and Research Sector

Contractor:

The Nova Scotia Department of
Housing & Consumer Affairs
40 Alderney Drive
5th Floor
P.O. Box 815
Dartmouth, Nova Scotia
B2Y 3Z3

CIDN:

1011 0600001

HOUSING/LOGEMENT

Ongoing Projects/Projets en cours

CANADIAN TEST OF SURVEY INSTRUMENTS AND INDICATORS OF QUALITY OF LIFE, HEALTH & WELL-BEING IN VARIOUS HOUSING ENVIRONMENTS

Objective:

To develop indicators and survey instruments which will be used to access quality of life in housing environments; to measure the impact on households of housing-based interventions and programs; to provide a standard set of instruments to assess and monitor the health and quality of life experienced by individuals and families; to better understand the contribution of housing and living environments to the quality of life experienced by individuals and families.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and
Research
Centre for Future Studies in
Housing and Living
Environments

Contractor:

University of Winnipeg
Institute of Urban Studies
346 Portage Avenue
Winnipeg, Manitoba
R3C 0C3

CIDN:

1516 0200001

LES ENSEMBLES RÉSIDENTIELS ET LA SÉCURITÉ ROUTIÈRE

Objet :

Inventorier les principes
d'aménagement des milieux
résidentiels proposés dans le but
d'assurer la sécurité des
différents usagers de la route et
la qualité de vie des habitants.

Agent de projet de la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

Denise Piché
Université Laval
École d'architecture
Québec (Québec)
G1K 7P4

NIC :

0925 0200001

Ongoing Projects/Projets en cours

ENVIRONMENTAL AND MARKETING SCAN RE: YOUTH, HOUSING AND COMMUNITY: INNOVATIONS AND BEST PRACTICES

Objective:

To review the current (and recent past) state of youth housing related issues in Canada and prepare a report.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research

Contractor:

Luba Serge
29, rue Easton
Montreal, Quebec
H4X 1K9

CIDN:

0835 0303001

FEASIBILITY STUDY FOR A SURVEY OF CONSUMER INTENTIONS TO BUY OR RENOVATE

Objective:

Undertake and complete a feasibility study for a survey of consumer intentions to buy or renovate.

CMHC Project Officer:

G. Goy

Division:

Market Analysis Centre

Contractor:

Prairie Research Associates Inc.
300-326 Broadway
Winnipeg, Manitoba
R3C 0S5

CIDN:

1587 1000001

THE FUTURE OF THE INTERNET AND THE HOUSING SECTOR

Objective:

Undertake a review of current housing and community planning applications on the Internet and explore the potential implications of various scenarios on the future of the Internet for the community planning sector.

CMHC Project Officer:

B. Sanscartier

Division:

Social and Economic Policy and Research
Centre for Future Studies in
Housing and Living
Environments

Contractor:

Syllable Internet Expressions
Inc.
5466 Hutchison
Montréal, Quebec
H2V 4B3

CIDN:

1619 0200001

1996 TRI-COUNTRY CONFERENCE

Objective:

Assist in bringing housing experts and practitioners together to exchange information and engage in discussions and workshops on key housing issues common to Canada, the Kingdom and the United States.

CMHC Project Officer:

J. Angus

Division:

Social and Economic Policy and Research

Contractor:

Canadian Housing & Renewal
Association
251 Laurier Avenue West
Suite 304
Ottawa, Ontario
K1P 5J6

CIDN:

1593 0200001

HOUSING AFFORDABILITY LOGEMENT ABORDABLE

Ongoing Projects/Projets en cours

CONVERSION OF NON-RESIDENTIAL SPACE TO AFFORDABLE HOUSING

Objective:

To develop user friendly building assessment tools that assist developers to determine the feasibility of conducting cost-effective conversions of non-residential space with minimal cash outlays.

CMHC Project Officer:

D. D'Amour

Division:

Social and Economic Policy and Research

Contractor:

Gibbons Hampton Architects Limited
Woodgate Building
66 Kenmount Road
Suite 306
St. John's, Newfoundland
A1B 3V6

CIDN:

1599 0200001

THE CUMULATIVE EFFECT OF LEVIES, FEES, AND TAXES AND TRANSACTION COSTS ON HOUSING AFFORDABILITY

Objective:

Produce an information report, designed to raise awareness about the cumulative effect of levies, development charges, fees, taxes and transaction costs on housing prices and affordability.

CMHC Project Officer:

D. Scherlowski

Division:

Social and Economic Policy and Research

Contractor:

Greg Lampert Economic Consultants
51 Maybourne Avenue
Scarborough, Ontario
M1L 2W1

CIDN:

1671 0200001

DOWNPAYMENT AFFORDABILITY MEASURE RESEARCH

Objective:

Investigate the downpayment affordability situation in Canada and determine the feasibility of developing a measure of downpayment affordability.

CMHC Project Officer:

D. Dallaire

Division:

Market Analysis Centre

Contractor:

Focus Consulting
40 Java Street
Ottawa, Ontario
K1Y 3L3

CIDN:

1581 1000001

EVALUATION OF AFFORDABILITY AND CHOICE (A.C.T.) PROGRAM

Objective:

Review the analysis plan and questionnaires drafted by CMHC and recommend improvement if needed; pretest the draft questionnaire and recommend improvement if needed.

CMHC Project Officer:

G. Murray

Division:

Program Evaluation Division

Contractor:

ABT Associates of Canada
112 Kent Street, Suite 2010A
Place de Ville, Tower "B"
Ottawa, Ontario
K1P 5P2

CIDN:

1630 0500001

AN IMPROVED MEASURE OF AFFORDABILITY FOR ESTIMATING HOUSING NEEDS

Objective:

Examine the relevance of the fixed 30% shelter cost-to-income ratio for measuring housing affordability in light of the level of actual shelter expenditures compared to incomes and second, examine the potential for an alternative variable shelter cost-to-income measure of affordability which would be more sensitive to differing households.

CMHC Project Officer:

J. Engeland

Division:

Social and Economic Policy and Research

Contractor:

Clayton Research Associates Limited
1580 Kingston Road
Scarborough, Ontario
M1N 1S2

CIDN:

1568 0200001

HOUSING AFFORDABILITY LOGEMENT ABORDABLE

Ongoing Projects/Projets en cours

MARKET ANALYSIS HOUSING AFFORDABILITY SOFTWARE PROJECT

Objective:

To produce a software program that will assist homebuyers and/or the real estate and housing industry in understanding affordability and the mortgage options available to consumers in a friendly, comprehensive and well-documented manner.

CMHC Project Officer:

D. Dall-Leblanc

Division:

Market Analysis Centre

Contractor:

AIM Technical Services
512-130 Albert Street
Ottawa, Ontario
K1P 5G4

CIDN:

1536 1000001

SHELTER AFFORDABILITY AND HOUSING NEEDS OF CANADIAN FOOD BANK CLIENTS

Objective:

To encourage an exchange of information on the substantive aspects of the project, Shelter Affordability and Housing Needs of Canadian Food Bank Clients.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Jeff A. Sloan
Associate Professor
University of Manitoba
Nursing Research Institute
Faculty of Nursing
Winnipeg, Manitoba
R3T 2N2

CIDN:

1099 0200001

SUMMARY REPORT ON MUNICIPAL REGULATORY MECHANISMS TO FACILITATE THE PRODUCTION OF AFFORDABLE HOUSING

Objective:

To undertake a background paper and presentation that will describe the use of regulatory mechanisms by municipalities to facilitate the production of affordable housing without the use of public funds.

CMHC Project Officer:

D. Scherlowski

Division:

Social and Economic Policy and
Research

Contractor:

Richard Drdla Associates
415 Wellesley Street East
Toronto, Ontario
M4X 1H5

CIDN:

1670 0200001

SYNTHESIS AND COMMUNICATIONS OF ACT INITIATIVES

Objective:

To carry out an analysis of completed ACT initiatives with the objective of developing information on those initiatives that have significant potential to improve housing affordability, or extend the range of housing choices.

CMHC Project Officer:

B. Gray

Division:

Social and Economic Policy and
Research

Contractor:

Mount Allison University
Dept. of Geography
Sackville, New Brunswick
E0A 3C0

CIDN:

1571 0200001

HOUSING AND IMMIGRATION LOGEMENT ET IMMIGRATION

Completed Reports/Rapports terminés

IMMIGRANTS AND THE CANADIAN HOUSING MARKET: LIVING ARRANGEMENTS, HOUSING CHARACTERISTICS, AND PREFERENCES.

*Prepared by Lapointe Consulting with Robert A. Murdie, York University. Ottawa:
Canada Mortgage and Housing Corporation, 1996.*

NOTE: Available from: CMHC, P.O. Box 3077, Markham, ON, L3R 6G4.
Tel.: 1-800-668-2642. ** Price \$12.99 plus GST and handling charges. Order
no. PE 199.

This report describes differences in housing choices of immigrants and non-immigrants in Canada and in Montreal, Toronto, and Vancouver. It also compares the housing choices of non-permanent residents to those of immigrants and non-immigrants. Based on an analysis of unpublished 1991 Census data, focus group discussions, and a review of literature, it updates a previous study completed for CMHC using 1986 Census data. The report focuses on age-specific average household sizes and household headship rates, as well as tenure and dwelling type choices. In addition, it also explores how immigrant housing choices vary by factors such as place of birth, period of immigration, and income, and includes a multivariate analysis of tenure choice. An assessment is made of the implications of identified differences in immigrant and non-immigrant choices for long-term projections of household growth.

The study confirms some of the main findings of the previous study. The report concludes that housing is an important element in the integration of immigrants into Canadian society and that most immigrant groups have a strong attachment to owning their dwelling. Over time, headship and ownership rates of immigrants become more and more similar to those of non-immigrants. Eventually, immigrant ownership rates exceed those of non-immigrants for most age groups. Housing tenure is strongly related to income, household type, age of the household maintainer, place of birth, and period of immigration. The study finds that utilizing a projection methodology that accounts for differences in immigrant and non-immigrant housing choices does not result in major differences in projected household growth over the long-term.

NOTE : Aussi disponible en français sous le titre : *Les Immigrants et le marché de
l'habitation canadien : modalités de vie des occupants, caractéristiques et
préférences en matière de logement.*

HOUSING AND IMMIGRATION LOGEMENT ET IMMIGRATION

Completed Reports/Rapports terminés

LES IMMIGRANTS ET LE MARCHÉ DE L'HABITATION CANADIEN : MODALITÉS DE VIE DES OCCUPANTS, CARACTÉRISTIQUES ET PRÉFÉRENCES EN MATIÈRE DE LOGEMENT.

*Préparé par Lapointe Consulting, de concert avec Robert A. Murdie, York University.
Ottawa : Société canadienne d'hypothèques et de logement, 1996.*

NOTE : Disponible par la poste : SCHL, C.P. 3077, Markham, ON, L3R 6G4,
Tél. : 1-800-668-2642. ** Prix : 12,99\$ + TPS + frais d'expédition. No. de
commande PF 199.

Ce rapport décrit les écarts entre les choix de logement des immigrants et ceux des non-immigrants au Canada et à Montréal, Toronto et Vancouver. Il compare également les choix de logement des résidents non permanents à ceux des immigrants et des non-immigrants. Se fondant sur une analyse de données non publiées du recensement du Canada de 1991, sur les comptes rendus de réunions de groupes de discussion et sur l'étude d'ouvrages de référence, il vient mettre à jour une étude précédente réalisée pour le compte de la SCHL à l'aide des données du recensement de 1986. Le présent rapport porte surtout sur les tailles moyennes des ménages et les taux de chef de ménage ainsi que sur les modes d'occupation et les choix de logement propres à chaque groupe d'âge. En outre, il explore de quelle manière les choix de logement des immigrants varient en fonction de facteurs comme le lieu de naissance, la période d'immigration et le revenu, et il renferme une analyse multivariée des choix de mode d'occupation. On y évalue les implications des écarts observés dans les choix de logement des immigrants et des non-immigrants sur les prévisions en matière de croissance des ménages à long terme.

Cette étude confirme certaines constatations faites dans l'étude précédente. Le présent rapport conclut que le logement est un élément important de l'intégration des immigrations à la société canadienne et que la plupart des groupes d'immigrants tiennent beaucoup à être propriétaires de leur logement. À mesure que s'allonge leur temps de résidence au Canada, les taux de chef et de propriété des immigrants rejoignent ceux des non-immigrants. Les taux de propriété des immigrants finissent par surpasser ceux des non-immigrants pour la plupart des groupes d'âge. Le mode d'occupation est étroitement relié au revenu, au type de ménage, à l'âge du soutien de ménage, au lieu de naissance et à la période d'immigration. L'étude en vient à la conclusion que l'utilisation d'une méthode prévisionnelle tenant compte des écarts entre les choix de logement des immigrants et ceux des non-immigrants ne produit pas d'écarts importants dans la croissance des ménages à long terme.

NOTE: Also available in English under the title: *Immigrants and the Canadian Housing Market: Living Arrangements, Housing Characteristics, and Preferences.*

HOUSING AND IMMIGRATION LOGEMENT ET IMMIGRATION

Ongoing Projects/Projets en cours

A COMPARATIVE STUDY OF IMMIGRANT HOUSING IN MONTREAL AND TORONTO

Objective:

To examine differences in housing conditions (tenure, dwelling type, cost) between visible minority immigrant groups living in Montreal and Toronto.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Brian K. Ray
McGill University
School of Architecture
815 Sherbrooke Street West
Montreal, Quebec
H3A 2K6

CIDN:

1283 0200001

HOUSING DESIGN ARCHITECTURE RESIDENTIELLE

Completed Reports/Rapports terminés

LA RÉALITÉ VIRTUELLE DANS LE LOGEMENT ET L'URBANISME.

Préparé par John Thurston. Préparé pour le Programme d'experts en résidence, Centre d'études prospectives sur l'habitation et le cadre de vie, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1996.

NOTE : Disponible par la poste : SCHL, C.P. 3077, Markham, ON, L3R 6G4,
Tél. : 1-800-668-2642. ** Prix : 12,99\$ + TPS + frais d'expédition. No. de
commande PF 204.

Dans l'usage général, le terme «réalité virtuelle» (RV) désigne un groupe de technologies informatiques utilisées pour simuler des mondes artificiels, de telle sorte que ceux qui pénètrent dans ces mondes ont l'illusion que ceux-ci existent réellement - virtuellement - et peuvent être habités et manipulés de l'intérieur. L'objectif de ce rapport est de donner un résumé et une analyse du domaine varié et en pleine expansion qu'est la réalité virtuelle, particulièrement pour les spécialistes du logement et de l'urbanisme.

Il se fait actuellement beaucoup de recherche et de développement sur les applications architecturales de la RV. Dans le domaine de l'éducation et de la formation, on étudie des applications visant à améliorer la qualité de vie des personnes handicapées, recréer à des fins éducatives des sites perdus à valeur culturelle et présenter des simulations de situations d'urgence à des fins d'évaluation et de formation. Dans les domaines de la conception et des essais, la RV est utilisée pour les essais, l'évaluation et la modification des conceptions. Les

HOUSING DESIGN ARCHITECTURE RESIDENTIELLE

Completed Reports/Rapports terminés

architectes, les constructeurs et les promoteurs peuvent concevoir des modèles en réalité virtuelle et déceler les problèmes de conception et les résoudre avant le début des travaux. Une des principales applications de la technologie de la réalité virtuelle à cet égard est l'essai interactif des milieux de vie sans obstacles.

Dans le domaine de la commercialisation, les recherches se poursuivent sur les possibilités qu'offre la réalité virtuelle d'illustrer les modèles conceptuels de maisons et de collectivités. Dans le domaine de l'urbanisme, la technologie de la réalité virtuelle permet aux urbanistes de gérer une énorme somme d'information et de recréer des emplacements complets à aménager. La technologie permet d'espérer une vraie participation à la conception, au point où les profanes pourraient un jour modifier ou même générer leurs propres modèles.

NOTE: Also available in English under the title: *Virtual Reality in Housing and Community Planning*.

VIRTUAL REALITY IN HOUSING AND COMMUNITY PLANNING.

Prepared by John Thurston. Prepared for the Experts in Residence Program, Centre for Future Studies in Housing and Living Environments, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996.

NOTE: Available from: CMHC, P.O. Box 3077, Markham, ON, L3R 6G4,
Tel.: 1-800-668-2642. ** Price: \$12.99 plus GST and handling charges. Order
no. PE 204.

Virtual reality (VR) is the widely-accepted term for a group of computer technologies used to simulate artificial worlds in such a way that those who enter those worlds have the illusion that the worlds actually - virtually - exist and can be inhabited and manipulated from within. The objective of this report is to provide a summary and analysis of the diverse and expanding field of VR, especially for professionals involved in housing and community planning.

Current VR research and development on architectural applications is extensive. VR applications are being explored for education and training to improve the quality of life of people with disabilities, reconstruct lost sites of cultural significance for educational purposes, and simulate emergency situations for training and testing. In the area of design and testing, VR is used to test, evaluate and modify designs. Architects, builders and developers can construct conceptual designs in virtual reality to identify design flaws and resolve these flaws prior to actual construction. One major application of virtual reality technology in this context is testing barrier-free living spaces interactively.

In the marketing field, research is ongoing on the potential of VR to illustrate conceptual designs of homes and communities. For community planning purposes, virtual reality technology enables planners to manage an immense amount of information, and recreate complete sites for development. The technology holds out the promise of true participatory design, to the point eventually of allowing laypeople to change or even generate their own designs.

NOTE : Aussi disponible en français sous le titre : *La Réalité virtuelle dans le logement et l'urbanisme*.

APPLICATION OF VIRTUAL REALITY TO THE FLEX HOUSING DESIGN COMPETITION, STAGE 1: FEASIBILITY ANALYSIS

Objective:

Explore and evaluate whether computer technology can be a cost-effective and useful tool to evaluate, test, modify and demonstrate housing design submitted to the Flex Housing Design Competition.

CMHC Project Officer:

T. Green

Division:

Social and Economic Policy and Research
Centre for Future Studies in Housing and Living Environments

Contractor:

Barry Pendergast Architect Ltd.
9203-29th Street South West
Calgary, Alberta
T2V 4V1

CIDN:

1586 0200001

FEASIBILITY OF DISABILITY-INTEGRATED, UNIVERSALLY DESIGNED INFILL CO-HOUSING IN AN URBAN SETTING

Objective:

To create a document which includes: A model of typical infill co-housing based on current literature and post-occupancy evaluation of existing co-housing developments and their residents.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

David Wetherow
Executive Director
Association for Community Living
1706-90 Garry Street
Winnipeg, Manitoba
R3C 4J4

CIDN:

1101 0200001

FLEX HOUSING DESIGN COMPETITION

Objective:

To develop the contractor's Stage 1 winning design of the Horizontal multiple dwelling to an advanced stage of completion so that it more adequately meets the Flex Housing Design Competition criteria.

CMHC Project Officer:

T. Parker

Division:

Technical Policy and Research Division

Contractors:

Ron Wickman
Finalta Designs Inc.
4307-116 Street
Edmonton, Alberta
T6J 1S1

Stéphane Hazan
Architectes
5509 Borden Avenue
Côte St.-Luc, Quebec
H4V 2T5

Nouvelle Development Corporation
48 Cliftonvale Avenue
London, Ontario
N6J 1J8

Karwood Estates Inc. & Gregg Construction Ltd.
200 Hussey Drive
St. John's, Newfoundland
A1A 4Y6

CIDN:

1389 0200004
1389 0200008
1389 0200009
1389 0200010

FLEX HOUSING DESIGN COMPETITION

Objective:

To develop the contractor's Stage 1 winning design of the Low-Rise dwelling to an advanced stage of completion so that it more adequately meets the Flex Housing Design Competition Criteria.

CMHC Project Officer:

T. Parker

Division:

Technical Policy and Research Division

Contractor:

Innovative Housing Society
201-1646 West 7th Avenue
Vancouver, British Columbia
V6J 1S5

CIDN:

1389 0200005

HOUSING DESIGN ARCHITECTURE RESIDENTIELLE

Ongoing Projects/Projets en cours

FLEX HOUSING DESIGN COMPETITION

Objective:

To develop the contractor's Stage 1 winning design of the single-detached dwelling to an advanced stage of completion.

CMHC Project Officer:

T. Parker

Division:

Technical Policy and Research
Division

Contractors:

McGill University
School of Architecture
815 Sherbrooke Street West
Montreal, Quebec
H3A 2K6

The Design Workshop
R.R.#1
Corbyville, Ontario
K0K 1V0

Radiant Homes
Site 25
R.R.#6
Armdale, Nova Scotia
B3L 4P4

Ron Wickman
Finalta Designs Inc.
4307-116 Street
Edmonton, Alberta
T6J 1S1

CIDN:

1389 0200003
1389 0200006
1389 0200007
1389 0200011

HABITATION ET FLEXIBILITÉ AU CANADA: BILAN 1991

Objet :

Construire une grille d'analyse permettant de dresser une typologie des solutions apportées par les architectes; et faire un rapport de synthèse proposant un bilan global des perspectives de résolution du problème de flexibilité dans un projet d'habitation.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

Annie Chelin
5780, rue Hutchison
Outremont (Québec)
H2Y 4B6

NIC :

0911 0200001

HABITATIONS NOUVELLES EN MILIEU ANCIEN

Objet :

La recherche porte sur les problèmes de design que posent l'implantation et l'intégration de nouvelles habitations dans les milieux résidentiels canadiens de facture plus ou moins homogène ou dans leurs zones limitrophes. Par extension, elle s'intéresse à toute opération de construction nouvelle en milieu ancien, qu'il s'agisse de recyclages, de rénovations ou d'agrandissements.

Agent de projet pour la SCHL :

M. Desbiens

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

Pierre-Richard Bisson
Université de Montréal
Case Postale 6128
Succursale Centre-ville
Montréal (Québec)
H3C 3J7

NIC :

1450 0200001

LE LOGEMENT CONTIGU REPENSÉ DANS SES ÉLÉMENTS

Objet :

Ce projet de recherche porte sur l'analyse des composantes, éléments structurants de base, du logement dit "contigu".

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

Richard de la Riva
Affleck, de la Riva architecture
1030 St.-Alexandre
Bureau 410
Montréal (Québec)
H2Z 1P3

NIC :

1645 0200001

MONTREAL : UNE GRANDE TRADITION D'HABITAT À DENSITÉ MOYENNE

Objet :

Ce projet veut mettre en lumière les processus d'adaptation du logement et des types de bâtiments à travers les diverses phases de l'évolution des formules "plex" (duplex, triplex, quatre-plex, comq-plex...) à Montréal au cours de quatre cycles de constructions entre 1866 et 1935.

Agent de projet pour la SCHL :

M. Macpherson

Division :

Politiques et recherche sociales
et économiques
Programme de subventions de
recherche

Contractant :

David B. Hanna
Université du Québec à
Montréal
Case postale 8888
Succursale Centre-Ville
Montréal (Québec)
H3C 3P6

NIC :

1455 0200001

PASSIVE SOLAR HOUSE DESIGNS FOR CANADA

Objective:

To identify relevant literature and design tools, analyze and interpret data in order to update the existing CMHC publication on passive solar house designs.

CMHC Project Officer:

F. Grammenos

Division:

Technical Policy and Research
Division

Contractor:

Leslie Jones & Associates Ltd.
319 Catherine Street
Ottawa, Ontario
K1R 5T4

CIDN:

1241 0200001

VILLE ST-LAURENT REVISITED: WARTIME HOUSING AND ARCHITECTURAL CHANGE, 1942-92

Objective:

To study the architectural modifications made to 25 houses in Ville St. Laurent, Quebec, constructed as temporary accommodation for workers during World War II and to analyze the specific design intentions of the program.

CMHC Project Officer :

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Dr. Annmarie Adams
McGill University
815 Sherbrooke Street West
Montreal, Quebec
H3A 2K6

CIDN:

1083 0200001

HOUSING EXPORT OPPORTUNITES DÉBOUCHÉS EXTÉRIEURS POUR LE SECTEUR DE L'HABITATION

Completed Reports/Rapports terminés

CANADA-CHINA LOW-COST HOUSING DEMONSTRATION PROJECT: PRE-FEASIBILITY ASSESSMENT: FINAL REPORT.

Prepared by Chreod Ltd. Prepared for International Relations Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996.

A proposal to undertake a joint low-cost housing demonstration project in Shanghai was made by China under the auspices of the Canada-China Memorandum of Understanding on housing. To address Canadian industry requests for additional information and a more complete proposal package for consideration, a technical mission to China was initiated. The mission team consisted of CMHC, Department of Foreign Affairs and International Trade and Chreod Ltd. The primary objective of the project was to conduct a pre-feasibility assessment of the Shanghai demonstration project in order to: define the market opportunity and identify potential risks to Canadian private sector participants; identify feasible measures to mitigate any risks; and recommend responsibilities for implementing these measures.

The mission concluded that the demonstration project offers a viable opportunity for the Canadian housing industry as a means to gain visibility in, and entry to, the Chinese housing market. Strong support from national and local Chinese government agencies was found for the Project. The assessment found that: 1) the market for the project appears to be secure; 2) the site is technically feasible; 3) local parties with which Canadian companies might joint venture are experienced and appear technically sound; and 4) the Chinese guaranteed purchase agreement with local government appears to be sound. Although financial, technical and regulatory risks exist they are not considered unusual in the China market and, with careful planning, could be mitigated.

HOUSING EXPORT OPPORTUNITIES

DÉBOUCHÉS EXTÉRIEURS POUR LE SECTEUR DE L'HABITATION

Ongoing Projects/Projets en cours

CMHC PRESENTATION TO KOBE INTERHOME '96, JAPAN: PROMOTING CANADA'S HOUSING INDUSTRY

Objective:

To develop the text for CMHC's presentation at the Kobe Interhome '96, in Japan, as part of that event's lecture series.

CMHC Project Officer:

P. Burr

Division:

International Relations Division

Contractor:

David Graham
901-1575 Beach Avenue
Vancouver, British Columbia
V6G 1Y5

CIDN:

1738 0900001

CANADIAN HOUSING FEASIBILITY STUDY FOR GERMANY

Objective:

Carry out a feasibility study and develop a proposal for a Canadian presentation to the German Government for a Canadian housing certificate program to more easily allow the export to Germany of Canadian housing systems, products and services.

CMHC Project Officer:

C. McCallum

Division:

International Relations Division

Contractor:

Otto & Erskine Architects Inc.
30 Rosemount Avenue
Suite 200
Ottawa, Ontario
K1Y 1P4

CIDN:

1712 0900001

CANADIAN/JAPANESE CONSTRUCTION COST ANALYSIS OF A TYPICAL 2X4 FRAMED HOUSE PLAN

Objective:

Develop a costing spreadsheet tool for use on all soft and hard costs forming part of the delivered turn key project including at minimum, design; permits; and approvals; materials; etc.

CMHC Project Officer:

P. Burr

Division:

International Relations Division

Contractor:

Export Council of Canadian
Architecture
901-1575 Beach Avenue
Vancouver, British Columbia
V6G 1Y5

CIDN:

1596 0900001

GUIDE TO DOCUMENTING HOUSING EXPORT PROJECTS FOR FINANCING PURPOSES

Objective:

Develop a guide for novice housing exporters that will help them to develop an export business plan for their projects.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

VSES Consultants
Victor Spassov Editorial Services
Ltd.
707 Fraser Avenue
Ottawa, Ontario
K2A 2S1

CIDN:

1727 0900001

GUIDE TO DOING HOUSING-RELATED BUSINESS WITH INTERNATIONAL FINANCIAL INSTITUTIONS

Objective:

To develop a guide that will help Canadian housing exporters to screen initial commercial inquiries from potential foreign customers.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

VSES Consultants
Victor Spassov Editorial Services
Ltd.
707 Fraser Avenue
Ottawa, Ontario
K2A 2S1

CIDN:

1731 0900001

HOUSING EXPORT OPPORTUNITIES DÉBOUCHÉS EXTÉRIEURS POUR LE SECTEUR DE L'HABITATION

Ongoing Projects/Projets en cours

GUIDE TO SELECTING A START-UP HOUSING EXPORT MARKET

Objective:

To develop a guide for novice housing exporters or the existing housing exporter that will assist them when deciding where to begin exporting or where to export next.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

The Bayswater Consulting Group
82 Bayswater Avenue
Ottawa, Ontario
K1Y 2E9

CIDN:

1732 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN CENTRAL AND EASTERN EUROPE

Objective:

To identify, measure, analyse and evaluate housing export opportunities for Canadians in Central and Eastern Europe.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

The Canadian Urban Institute
30 St. Patrick Street
6th Floor
Toronto, Ontario
M5T 3A3

CIDN:

1580 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN LATIN AMERICA

Objective:

To prepare a study to give depth to the sparse information and analysis that currently is available about Latin American housing markets and market opportunities as well as Canada's capacity to address these opportunities.

CMHC Project Officer:

L. Marti-Aguilar

Division:

International Relations Division

Contractor:

Holmen Enterprises Limited
8449-118 Street
Edmonton, Alberta
T6G 1T2

CIDN:

1563 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN MAINLAND ASIA AND THE PACIFIC RIM

Objective:

To carry out research on mainland Asia (excluding China) which will identify, measure, analyse and evaluate housing export opportunities for Canadians.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

Hickling Corporation
350 Sparks Street
6th Floor
Ottawa, Ontario
K1R 7S8

CIDN:

1565 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN THE MIDDLE EAST

Objective:

Carry out a study to identify, measure, analyse and evaluate housing export opportunities for Canadians in the Middle East.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

Nordicity Group Ltd.
280 Albert Street
10th Floor
Ottawa, Ontario
K1P 5G8

CIDN:

1608 0900001

HOUSING EXPORT OPPORTUNITIES FOR CANADIANS IN WESTERN EUROPE

Objective:

To identify, measure, analyse and evaluate housing export opportunities for Canadians in Western Europe.

CMHC Project Officer:

C. McCallum

Division:

International Relations Division

Contractor:

Trema Gestion Conseil Inc.
10160 avenue St-Charles
Montreal, Quebec
H2C 2L4

CIDN:

1564 0900001

HOUSING EXPORT OPPORTUNITIES IN THE U.S. FOR CANADA'S HOUSING INDUSTRY

Objective:

To identify, measure, analyse and evaluate housing export opportunities for Canadians in the United States.

CMHC Project Officer:

P. Spurr

Division:

International Relations Division

Contractor:

Centre for International Business
Studies
École des hautes études
commerciales
5255 Decelles Avenue
Montreal, Quebec
H3T 1V6

CIDN:

1504 0901001

HOUSING EXPORTER GUIDES 3-5 (NEW EXPORTER SERIES)

Objective:

Develop three guides for Canada's housing exporters.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

Perwit International
505 Westminster Avenue
Ottawa, Ontario
K2A 2T9

CIDN:

1710 0900002

SCREENING GUIDE FOR CANADA'S HOUSING EXPORTERS

Objective:

Develop a guide that will help Canadian housing exporters to undertake projects financed by international financial institutions.

CMHC Project Officer:

G. Duc

Division:

International Relations Division

Contractor:

VSES Consultants
Victor Spassov Editorial Services
Ltd.
707 Fraser Avenue
Ottawa, Ontario
K2A 2S1

CIDN:

1726 0900001

HOUSING FORECASTING AND DEMAND PRÉVISION ET DEMANDE DE LOGEMENTS

Ongoing Projects/Projets en cours

ÉVOLUTION DE LA DEMANDE DE LOGEMENT ET STABILITÉ DES PRIX IMPLICITES DES ATTRIBUTS RÉSIDENTIELS : UNE COMPARAISON 1986-1991

Objet :

Dresser pour 1991-92 la carte des préférences des ménages de la région de Québec en matière résidentielle; mesurer l'ampleur et la direction des modifications dans la demande de logement au cours de cette période à l'aide des

changements dans les prix implicites des caractéristiques, et ce pour un ensemble de sous-marchés qui restent à déterminer.

Agent de projet pour la SCHL :

M. Macpherson

Division:

Politiques et recherche sociales et économiques
Programme de subventions de recherche

Contractant :

François DesRosiers
Université Laval
Cité universitaire
Québec (Québec)
G1K 7P4

NIC :

1275 0200001

HOUSING MARKET MARCHÉ DE L'HABITATION

Ongoing Projects/Projets en cours

MATCHING BUYERS AND SELLERS IN THE RESALE HOUSING MARKET

Objective:

To encourage an exchange of information on the substantive aspects of the project, Matching Buyers and Sellers in the Resale Housing Market.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Christopher T. Ragan
Assistant Professor
McGill University
Department of Economics
855 Sherbrooke Street West
Montreal, Quebec
H3A 2T7

CIDN:

1098 0200001

HOUSING POLICY/POLITIQUE DU LOGEMENT

Completed Reports/Rapports terminés

LE RÔLE DU LOGEMENT DANS LA POLITIQUE SOCIALE.

Parrainé par le Centre d'études prospectives sur l'habitation et le cadre de vie, Société canadienne d'hypothèques et de logement. Organisé par le Caledon Institute of Social Policy, Septième congrès de la politique sociale canadienne, Vancouver (Colombie-Britannique) juin 1995. Ottawa: Caledon Institute of Social Policy, 1996.

NOTE : On peut obtenir les publications de l'institut Caledon de : Renouf Publishing Company Limited, 1294, chemin Algoma, Ottawa, ON, K1B 3W8, Tél. : 613-741-4333

Cette monographie comprend un ensemble d'exposés qui ont été présentés pendant un panel dans le cadre du Septième congrès de la politique sociale canadienne, dont le thème était *Repenser la politique sociale au Canada*. Le Caledon Institute of Social Policy cherche à promouvoir les débats informés sur les programmes sociaux. Bien que le logement soit un domaine critique de la politique sociale, il y a très peu de débats publics sur le rôle du logement dans le cadre plus vaste de la politique sociale.

Le logement social englobe la totalité de la structure du système de logement qui permet aux individus d'obtenir et de conserver un logement à un coût abordable, et ce, quel que soit leur niveau de revenu. Ces exposés présentent plusieurs points de vue sur le logement et montrent qu'il est un complément inestimable de la politique sociale. Ces exposés indiquent qu'un logement abordable et de qualité raisonnable peut jouer un rôle important dans l'atteinte du but de la politique sociale, qui est d'améliorer la santé et le bien-être. Ils montrent aussi qu'une mauvaise politique du logement et que le manque de coordination avec les autres programmes et services sociaux peuvent aller à l'encontre du but recherché.

NOTE: Also available in English under the title: *The Role of Housing in Social Policy*.

THE ROLE OF HOUSING IN SOCIAL POLICY

Sponsored by the Centre for Future Studies in Housing and Living Environments, Canada Mortgage and Housing Corporation. Hosted by the Caledon Institute of Social Policy at the 7th Annual Social Welfare Policy Conference, Vancouver, British Columbia, June 1995. Ottawa: Caledon Institute of Social Policy, 1996.

NOTE: Caledon publications are available from: Renouf Publishing Company Limited, 1294 Algoma Road, Ottawa, ON, K1B 3W8, Tel.: 613-741-4333.

This monograph contains a set of papers presented in a panel session at the Seventh Biennial Social Welfare Policy Conference, *Remaking Canadian Social Policy*. The Caledon Institute of Social Policy seeks to promote informed debate on social programs. While housing is a critical area of social policy, there has been little public discussion of the role of housing in the broader social policy context.

Social housing encompasses the entire framework of the housing system that allows individuals to access and retain shelter at a cost that is affordable at all income levels. These papers present a number of perspectives on housing and demonstrate how it is an invaluable complement to social policy. The papers show that housing which is affordable and in a reasonable state of repair can play an important role in achieving the social policy goal of improving health and well-being. They also indicate that poor housing policy and the lack of coordination with other social programs and services can be counterproductive.

NOTE : Aussi disponible en français sous le titre : *Le Rôle du logement dans la politique sociale*.

HOUSING SAFETY SECURITÉ À DOMICILE

Ongoing Projects/Projets en cours

SAFETY AUDIT KIT AND DEMONSTRATION RESEARCH PROJECT

Objective:

To develop and process for delivery the safety audit kit demonstration research project.

MHC Project Officer:

B. Baxter

Division:

Social and Economic Policy and Research

Contractor:

Mount Allison University
Rural and Small Town
Programme
Sackville, New Brunswick
E0A 3C0

CIDN:

1545 0100001

HOUSING SAFETY SECURITÉ À DOMICILE

Ongoing Projects/Projets en cours

SÉCURITÉ URBAINE, PRÉVENTION DE LA CRIMINALITÉ ET INTERVENTIONS EN HABITATION DANS LES QUARTIERS MONTRÉALAIS

Objet :

La présente a pour but de vous confirmer l'engagement de la SCHL à financer un projet de la SHDM intitulé Sécurité urbaine, prévention de la criminalité et interventions en habitation dans les quartiers montréalais.

Agent de projet pour la SCHL :
B. Baxter

Division :

Politiques et recherche sociales
et économiques

Contractant :

Société d'habitation du Québec
Direction générale de la
planification et de la recherche
1054 rue Conroy
Québec (Québec)
G1R 5E7

NIC :

1411 0100001

INFRASTRUCTURE

Ongoing Projects/Projets en cours

MUNICIPAL SERVICES AND FINANCING AND PRICING POLICIES, MAINTENANCE AND REHABILITATION PRACTICES, AND THE CONDITION OF THE INFRASTRUCTURE

Objective:

To carry out a study on the link between organizational structure for the delivery of municipal services and financing and pricing policies, maintenance and rehabilitation practices and the condition of the infrastructure.

CMHC Project Officer:

S. Jacques

Division:

Social and Economic Policy and
Research

Contractor:

University of Winnipeg
Institute of Urban Studies
346 Portage Avenue
Winnipeg, Manitoba

R3C 0C3

CIDN:

1528 0200001

LE PAYSAGE DE L'INTÉRIEUR OU EXPRESSIONS PAYSAGÈRES RÉSIDENTIELLES DANS L'ÎLE DE MONTRÉAL.

Préparé par Danièle Routaboule, Vincent Asselin et Catherine Eveillard. Ottawa : Société canadienne d'hypothèques et de logement, 1995. (Programme de subventions de recherche).

Cette recherche part de la prémisses que le paysage public montréalais a été principalement conçu à partir de courants de pensées externes, certains étant bien connus, identifiés et documentés. Elle cherche à découvrir, au-delà des mouvements de pensées culturels et internationaux connus et producteurs de paysages urbains publics, les usages, les expressions paysagères et la façon de prendre possession du sol des Montréalais. Le thème abordé est donc celui du «paysage de l'intérieur, soit personnel» plutôt que celui du «paysage extérieur, soit officiel».

Trois quartiers ont été choisis comme étant particulièrement représentatifs de Montréal :

1. Plateau Mont-Royal pour l'homogénéité de sa typologie architecturale et celle de sa population essentiellement francophone.
2. Notre-Dame-de-Grâce pour l'hétérogénéité de sa typologie architecturale et de sa population s'apparentant à la culture anglophone.
3. Le Mile-End particulièrement cosmopolite.

L'ample provision d'espaces extérieurs qui caractérisent certains quartiers de la ville de Montréal a donné lieu à une extraordinaire floraison de paysages qui fait le charme de ces quartiers. À travers toutes les observations des chercheurs, une constante se dessine : l'évolution récente des paysages résidentiels est profondément liée aux changements de population et aux origines culturelles et ethniques des habitants, de même qu'à leur position sociale. Elle est aussi liée aux modes de vie et aux différentes typologies architecturales rencontrées. Trois facteurs apparaissent donc déterminants :

1. Les traditions jardinières liées aux origines ethniques des habitants et leur statut social. Deux cas de figure ressortent de l'étude. Le premier exemple concernant le quartier du plateau Mont-Royal met en évidence l'émergence de nouvelles pratiques jardinières fortement liées à une inspiration locale et québécoise, d'origine assez récente. Le second concernant le Mile-End et Notre-Dame-de-Grâce met en évidence l'influence des immigrants particulièrement européens dans la création d'un patrimoine jardinier propre à Montréal.
2. La morphologie urbaine de chaque quartier. La morphologie urbaine et la typologie architecturale ont une forte influence sur la perception que nous avons du monde des jardins. Dans certains cas la concentration des bâtisses crée deux mondes séparés : jardins avant et arrière, tandis que l'écartement des bâtisses conduit à la création d'espaces aérés avec de larges dégagements conduisant la vue vers les jardins arrière. Il en ressort l'impression de se promener dans une cité jardin.

3. Les changements de mode de vie. Deux cas de figure se dessinent : Le premier repose sur les traditions et les savoir-faire créés par les immigrants européens où l'activité de jardiner occupe une grande place. Chez les immigrants, le jardin fait partie de l'univers familial au même titre que la maison; il occupe une place importante dans la production domestique et les loisirs familiaux. Le second est lié au mode vie contemporain où l'on passe un temps de plus en plus restreint chez soi et où le travail et la détente sont deux mondes séparés. On veut bien avoir un jardin, mais on ne veut pas y être lié; on veut bien jouer dans la terre au début du printemps, mais on souhaite que ça pousse tout seul le reste de l'année.

Enfin dans tous les quartiers visités, la présence des jardins renforce le sentiment d'appartenance des habitants et cristallise la perception des caractères particuliers de chaque quartier et de chaque secteur. Les jardins sont une courroie de transmission entre les anciens et les nouveaux propriétaires; ils jouent un grand rôle dans le double aspect de la préservation de l'identité de chaque lieu et sa reconstruction continue en fonction des désirs et des projets des nouveaux arrivants. Parce qu'ils sont une matière vivante sans cesse en transformation, les vagues successives d'occupants peuvent y insérer leur propre projet tout en prolongeant l'histoire déjà inscrite dans les lieux.

MANUFACTURED HOUSING HABITATIONS USINÉES

Completed Reports/Rapports terminés

A STRUCTURAL PROFILE OF THE MANUFACTURED HOUSING INDUSTRY IN CANADA, UNITED STATES, JAPAN AND GERMANY.

Prepared by Terrence McGrath. Prepared for Strategic Planning Division, Canada Mortgage and Housing Corporation and the Canadian Manufactured Housing Association. Ottawa: CMHC, 1996.

A statistical profile of the Canadian manufactured housing industry has never been available to industry stakeholders. The absolute size of the industry and the relative shares of the differing market segments have not been known. Canada Mortgage and Housing Corporation and the Canadian Manufactured Housing Association sought to determine the absolute size of the Canadian manufactured housing industry, the size of the manufactured housing industry relative to the site built housing industry, as well as to identify market trends in the types of manufactured housing that is produced in Canada.

Manufactured housing is comprised of several types of factory built product; specifically mobile, modular, pre-cut packages, panelized, timber frame and log homes. This report presents a profile of the Canadian, United States, Japanese and German manufactured housing markets. It presents a macro view of the industry based upon the survey of manufacturers that was undertaken and analyzes each type of manufactured housing over the five year 1989-1993 period. The early years of this decade were characterized by a major recession in the Canadian housing market as well as in Europe, the United States and Japan. The results of this study illustrate that despite adverse overall market conditions, the Canadian manufacturing housing market has, in some aspects, become more competitive both at home and internationally.

MANUFACTURED HOUSING/HABITATIONS USINÉES

Ongoing Projects/Projets en cours

AN OPTIMUM VALUE ENGINEERING (OVE) STUDY OF THE CANADIAN MANUFACTURED HOUSING INDUSTRY

Objective:

Prepare an industry analysis and a series of engineering reports compiled into a final report which will present detailed and tangible findings and recommendations to achieve optimum value from the manufacturing process.

CMHC Project Officer:

J. Robar

Division:

Technical Policy and Research
Division

Contractor:

Canadian Manufactured Housing
Institute
150 Laurier Avenue West
Suite 200
Ottawa, Ontario
K1P 5J4

CIDN:

1597 0200001

RORO - MODULAR HOME SHIPPING SYSTEM

Objective:

Develop a building module transportation system which, cost effectively, utilizes the untapped capacity of Japanese car and transport ships as they return empty to their home ports.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Ian Bazley
Architect
32 Bello Road
Kelowna, British Columbia
V1V 1C1

CIDN:

1646 0200001

MOISTURE PROBLEMS/HUMIDITÉ

Ongoing Projects/Projets en cours

EIFS RAINSCREEN PRODUCT SYSTEM

Objective:

To test the performance of a new Exterior Insulation and Finish system with a pressure equalized rain screen.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
Housing Technology Incentives
Program

Contractor:

STO Industries Canada Inc.
3495 Laird Road
Unit 16-18
Mississauga, Ontario
L5L 5S5

CIDN:

1268 0200001

ICE DAMMING DATA ANALYSIS

Objective:

Analyse all the data collected in the previous project "Ice Damming Field Research" and provide a report on the findings.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research Division

Contractor:

Scanada Consultants Limited
446 Reynolds Street
Oakville, Ontario
L6J 3M4

CIDN:

1662 0300004

PERFORMANCE EVALUATION OF WATER REPELLENTS FOR ABOVE GRADE MASONRY

Objective:

Evaluate the performance of various water repellents on a comparative basis and develop practical methods to evaluate their effectiveness.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Dominic Chiovitti
1320, Boulevard Lionel Boulet
Varenes, Quebec
J3X 1P8

CIDN:

1634 0200001

STRAW BALE MOISTURE SENSOR STUDY

Objective:

To develop and test inexpensive moisture sensors that could be used by owners of straw bale houses for monitoring of moisture conditions inside straw walls.

CMHC Project Officer:

D. Fugler

Division:

Technical Policy and Research Division

Contractor:

Instruscience Ltd.
65 Bentley
#15
Ottawa, Ontario
K2E 8B4

CIDN:

1720 0800001

MORTGAGES AND HOUSING FINANCE HYPOTHÈQUES ET LOGEMENT -- FINANCES

THE IMPACT OF INHERITANCES ON THE MORTGAGE MARKET IN CANADA

Objective:

To investigate the impact of inheritances on the mortgage market in Canada.

CMHC Project Officer:

T. Elliot

Division:

Social and Economic Policy and Research

Contractor:

Clayton Research Associates
1580 Kingston Road
Scarborough, Ontario
M1N 1S2

CIDN:

1588 100001

Ongoing Projects/Projets en cours

ADDRESSING SPECIAL HOUSING NEEDS IN FIRST NATION COMMUNITIES

Objective:

To carry out a research study to ensure a First Nations perspective and First Nations involvement through the use of an advisory committee of members of the Housing Committee of the Policy Congress of Atlantic First Nation Chiefs.

CMHC Project Officer:

N. Koeck

Division:

Delivery and FP Relations Division

Contractor:

Mount Allison University
Department of Geography
Sackville, New Brunswick
E0A 3C0

CIDN:

1544 0100001

ANALYSIS OF MIGRATION AND RESIDENTIAL MOBILITY PATTERNS AMONG CANADA'S ABORIGINAL POPULATION

Objective:

To undertake a study examining both the migration and mobility patterns among Aboriginal groups. The study will determine the implications for a number of RCAP's mandates. The topics of the study will cover urban, women and youth perspectives, as well as the northern, land and economy and governance themes.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre for Future Studies in Housing and Living Environments

Contractor:

Royal Commission on Aboriginal Peoples
427 Laurier Avenue
6th Floor
P.O. Box 1993
Station "B"
Ottawa, Ontario
K1P 1B2

CIDN:

1171 0200001

APPLICATION OF HOME OWNERSHIP TENURES BY FIRST NATIONS COMMUNITIES ON-RESERVE

Objective:

To explore the concept of home ownership on-reserve, and how different communities have developed forms of home ownership or home ownership type tenures, so that other First Nations communities can learn from these models.

CMHC Project Officer:

N. Koeck

Division:

Delivery and FP Relations Division

Contractor:

Patrick Brascoupe Apikan Limited
Kitigan Zibi
P.O. Box 339
Maniwaki, Quebec
J9E 3C9

CIDN:

1401 0101001

FEASIBILITY STUDY TO OVERCOME BARRIERS FOR ABORIGINAL HOME OWNERSHIP

Objective:

Research and identify Aboriginal population statistics, average income levels; and the percentages in rental and ownership housing; etc.

CMHC Project Officer:

N. Koeck

Division:

Delivery and FP Relations Division

Contractor:

Gignul Non-Profit Housing Corporation
Suite 712
151 Slater Street
Ottawa, Ontario
K1P 5H3

CIDN:

1613 1500001

**FOLLOW-UP TO
ABORIGINAL HOUSING
NEEDS STUDY**

Objective:
To develop detailed housing
condition information for
specific Aboriginal groups.

CMHC Project Officer:
J. Engeland

Division:
Social and Economic Policy and
Research

Contractor:
Ark Research Associates
165 Hinton Avenue North
Ottawa, Ontario
K1Y 0Z9

CIDN:
1598 0200001

**PLANNING OF NATIVE
NORTHERN COMMUNITIES**

Objective:
An evaluation of the level of
success of existing planning and
housing practice for Native
communities in the western
portion of the Northwest
Territories.

CMHC Project Officer:
D. Jamieson

Division:
Social and Economic Policy and
Research
External Research Program

Contractor:
Gino A. Pin
Sub Post Office no. 1
3502 Raccine Road
Yellowknife, Northwest
Territories
X1A 2S9

CIDN:
1462 0200001

**SECOND STAGE HOUSING
FOR ABORIGINAL WOMEN**

Objective:
Establish the need for second
stage housing for Aboriginal
women and their children and
develop a transferable
community-based model for use
across Canada; develop a
framework to measure the
impact of housing conditions on
the well-being of Aboriginal
women and their children.

CMHC Project Officer:
N. Koeck

Division:
Delivery and FP Relations
Division

Contractor:
Native Women's Association of
Canada
9 Melrose Avenue
Ottawa, Ontario
K1Y 1T8

CIDN:
1152 0100001

**SYNTHESIS OF RESEARCH
ON ABORIGINAL
POPULATION - PHASE 1**

Objective:
Prepare a final edited version of
the report, Canada's Aboriginal
Population 1981-1991, and two
CMHC Research and
Development Highlights for the
reports, The Housing Conditions
of Aboriginal People in Canada
1991 and Summary Report on
Projections of the Population
with Aboriginal Identity in
Canada, 1991-2016.

CMHC Project Officer:
D. Chamberland

Division:
Social and Economic Policy and
Research
Centre For Future Studies in
Housing and Living
Environments

Contractor:
Four Directions Consulting
Group
410-112 Market Avenue
Winnipeg, Manitoba
R3B 0P4

CIDN:
1590 0200001

Completed Reports/Rapports terminés

RENATURALISATION DES SURFACES DÉCAPÉES AU VOISINAGE DES HABITATIONS DANS LE VILLAGE NORDIQUE DE KUUJJUAQ.

Préparé par Patrice Babeux et Gilles Houle. Ottawa : Société canadienne d'hypothèques et de logement, 1995. (Programme de subventions de recherche).

En milieu nordique, le développement domiciliaire s'accompagne généralement de perturbations importantes du couvert végétal au voisinage des habitations. Les problèmes engendrés par l'éolisation, suite au décapage des surfaces auparavant recouvertes de végétation, sont multiples. En mai 1995, la Société canadienne d'hypothèques et de logement confirmait sa participation financière à un programme de recherche sur la restauration du couvert végétal en milieu nordique. L'objectif général de cette recherche était de développer des méthodes efficaces de renaturalisation des surfaces décapées au voisinage des habitations du village nordique de Kuujjuaq.

En tout, dix expérimentations ont été planifiées pour rencontrer les objectifs scientifiques du programme de recherche. Six d'entre elles portent sur la production de plants par le bouturage de rameaux de divers espèces ligneuses locales. Une autre expérimentation concerne la production de semis de bouleau glanduleux, d'aulne crispé et de mélèze laricin. Deux autres expérimentations examinent la performance en plantation de certaines des espèces déjà mentionnées soit l'aulne crispé, le bouleau glanduleux, le mélèze laricin et le saule planifolié. Enfin, une dernière expérimentation porte sur le rendement, sur substrat sableux, de différents mélanges de graines de provenance locale.

Ce programme de recherche a permis d'apporter d'importantes précisions quant au potentiel de plusieurs espèces à des fins de renaturalisation des surfaces décapées au voisinage des habitations du village de Kuujjuaq. Les deux espèces de saule, *Salix planifolia* et *S. vestita*, du côté des espèces ligneuses bouturables, ainsi que l'aulne crispé et le bouleau glanduleux, parmi les espèces ligneuses dont les plants sont produits à partir de graines, présentent un potentiel très élevé. Du côté des herbacées, deux graminées, *Poa alpina* et *Agropyron violaceum*, et une légumineuse, *Oxytropis hudsonica*, sont susceptibles de renaturaliser efficacement et rapidement les surfaces décapées. L'utilisation de ces espèces est fortement recommandée.

THE NORTH/LE NORD

Ongoing Projects/Projets en cours

MEASUREMENT OF HOUSING NEED IN NORTHERN AND REMOTE AREAS

Objective:

Assess the feasibility of, and develop recommendations for, potential enhancements to existing measures of housing need that will better capture differences in the severity of problems between the north and the rest of Canada.

CMHC Project Officer:

J. Angus

Division:

Social and Economic Policy and Research

Contractor:

University of Winnipeg
Institute of Urban Studies
346 Portage Avenue
Winnipeg, Manitoba
R3C 0C3

CIDN:

1527 0200001

QUALITY OF LIFE/QUALITÉ DE LA VIE

Ongoing Projects/Projets en cours

THE COMMUNITY ORIENTED MODEL OF THE LIVED ENVIRONMENT: REVISION OF DATA TABLES AND ANNOTATED BIBLIOGRAPHY

Objective:

Update and revise measures and data sources for indicators and specific measures for the Community Oriented Model of the Lived Environment (COMLE) and update the annotated quality of life research.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre for Future Studies
in Housing and Living
Environments

Contractor:

Judy Bates
Department of Geography
York University
4700 Keele Street
North York, Ontario
M3J 1P3

CIDN:

1680 0200001

Completed Reports/Rapports terminés

ÉTUDE DE FAISABILITÉ POUR ÉTABLIR LE PROFIL DES INVESTISSEURS DE LOGEMENT LOCATIF AU CANADA.

Préparé par Marc Godbout. Préparé pour le Centre d'études prospectives sur l'habitation et le cadre de vie, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1996.

L'objectif de ce projet était d'explorer les différentes possibilités d'obtenir les données pour établir un portrait des investisseurs dans le logement locatif avec une recommandation pour la méthode à retenir. Le consultant a révisé les bases de données accessibles qui ont des informations socio-économiques sur les investisseurs dans le logement locatif afin d'y déceler les avantages et les inconvénients en terme d'accessibilité, de fiabilité, de la capacité d'établir une tendance et de la désagréger géographiquement. Le consultant recommande que la SCHL utilise des sources d'informations nationales déjà disponibles (Système UPS de la SCHL, Enquête sur le taux d'inoccupation, compilation de Statistiques Canada à partir des déclarations de revenus des particuliers). La qualité des résultats obtenus et donc du profil établi dépendra largement des hypothèses de départ et du type d'analyse qui sera conduit.

Ongoing Projects/Projets en cours

THE RESIDUALIZATION OF RENTAL TENURE: IMPLICATIONS FOR HOUSING POLICY

Objective:

Examine how both the rental housing stock and the profile of rental tenants has changed over the past 2 decades from 1971-91; explore how the changing tenant profile is perceived by private rental landlords; and determine if this change is significant in influencing the decisions of private rental landlords to disinvest in rental housing. The emphasis is not on the feasibility of new rental construction but on transactions in the existing rental stock.

CMHC Project Officer:

B. Sanscartier

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Stephen P. Pomeroy
Focus Consulting
40 Java Street
Ottawa, Ontario
K1Y 3L3

CIDN:

1463 0200001

LE SECTEUR LOCATIF PRIVÉ ET SA NOUVELLE CLIENTÈLE

Objet :

La revue de littérature (y inclus des recherches sur l'internet) aura comme objectif d'identifier des approches et des

programmes qui visent des relations harmonieuses entre les propriétaires et leur nouvelle clientèle.

Agent de projet pour la SCHL

M. Macpherson

Division :

Politiques et recherche sociale et économiques
Programme de subventions de recherche

Contractant :

Luba Serge
29, rue Easton
Montreal (Québec)
H4X 1K9

NIC :

1648 0200001

RESIDENTIAL DEVELOPMENT AMÉNAGEMENT RÉSIDENTIEL

Ongoing Projects/Projets en cours

RESIDENTIAL STREET DESIGN: LEARNING FROM SUBURBIA

Objective:

To generate concrete design solutions based upon a thorough understanding of precedents, and introduce and stimulate new ideas for land developers and design professionals.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Sevag Pogharian
Sevag Pogharian Design
4643 Sherbrooke Street West
Suite 12
Montreal, Quebec
H3Z 1G2

CIDN:

1644 0200001

REVENUE AND NET COSTS ASSOCIATED WITH CONVENTIONAL AND ALTERNATIVE DEVELOPMENT PATTERNS

Objective:

Compare life-cycle revenues and net costs associated with two patterns of development:

a conventional suburban development pattern and a mixed-use, more compact development planned according to the principles of "New Urbanisms".

CMHC Project Officer:

D. D'Amour

Division:

Social and Economic Policy and Research

Contractor:

Hemson Consulting Ltd.
30 St. Patrick Street
Suite 1000
Toronto, Ontario
M5T 3A3

CIDN:

1552 0200001

RESIDENTIAL REHABILITATION RÉNOVATION DE LOGEMENTS

Ongoing Projects/Projets en cours

CONSTRUCTION D'UN INDICE SYNTHÉTIQUE POUR LES DÉPENSES DE RÉNOVATION RÉSIDENTIELLE AU QUÉBEC

Objet :

L'objectif de ce projet est de construire un indice synthétique précurseur des dépenses de rénovation résidentielle pour le Québec, dont les caractéristiques et les paramètres pourraient être éventuellement

transposés aux six régions métropolitaines du Québec.

Agent de projet pour la SCHL :

G. Proulx

Division :

Centre d'analyse de marché

Contractant :

François Raymond
c/o Cirano
2020 rue Université
25ème étage
Montréal (Québec)
H3A 2A5

NIC :

1631 1000001

RESIDENTIAL REHABILITATION RÉNOVATION DE LOGEMENTS

Ongoing Projects/Projets en cours

HOMEOWNER MOTIVATION AND INNER CITY REVITALIZATION: AN EXAMINATION OF RELATED FACTORS IN WINNIPEG

Objective:

To identify the revitalization process underway (e.g.) incumbent upgrading or gentrification in inner city areas demonstrating a high level of renovation activity.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Tom Carter
University of Manitoba
Faculty of Architecture
Architecture 2 Building
Winnipeg, Manitoba
R3T 2N2

CIDN:

1277 0200001

LOCAL INDICATORS OF RENOVATION SPENDING

Objective:

To study local indicators of renovation spending and determine the reliability of current measures of renovation activity at the CMA level, and make recommendations for the construction of comprehensive, reliable and timely indicators of renovation activity and develop the indicators for selected CMAs.

CMHC Project Officer:

G. Proulx

Division:

Market Analysis Centre

Contractor:

Clayton Research Associates
1580 Kingston Road
Scarborough, Ontario
M1N 1S2

CIDN:

1234 1001001

RENOVATING MULTIPLE HIGH-RISE RESIDENTIAL BUILDING FOR THE INFORMATION HIGHWAY

Objective:

To obtain information to guide building owners and managers, architects and engineers on the options and alternatives to bring high-rise residential buildings up to date for the information highway.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre for Future Studies in Housing and Living
Environments

Contractor:

Connors Architects and Planners
1489 Hollis Street
P.o. Box 606
Halifax, Nova Scotia
B3J 2R7

CIDN:

1684 0200001

RENOVATION IN CANADA CHAPTERS II, V, VI.

Objective:

Undertake the production of Chapters II, V, VI of the discussion paper "Renovation in Canada" and expand the existing appendix of this paper to include lessons learned from Scotland and The Netherlands.

CMHC Project Officer:

P. Archer

Division:

Technical Policy and Research Division

Contractor:

Marc Denhez
150 Laurier Avenue West
Ottawa, Ontario
K1P 5J4

CIDN:

1677 0300005

**RENOVATOR'S RESOURCE
GUIDE: BUILDING SCIENCE
AND HOUSE PERFORMANCE**

Objective:

Development of the Renovator's
Resource Guide: Building
Science and House Performance

CMHC Project Officer:

T. Marshall

Division:

Technical Policy and Research
Division

Contractor:

Lio and Associates
88 Prince Arthur Avenue
Suite 300
Toronto, Ontario
M5R 1B6

CIDN:

1592 0300001

SEWAGE DISPOSAL/EAUX USÉES

Completed Reports/Rapports terminés

ESTIMATION OF THE CONTRIBUTION OF PHOSPHORUS FROM ON-SITE SEWAGE DISPOSAL SYSTEMS TO LAKES.

Prepared by D.H. Waller, S.C. Sauveur and J.D. Mooers. Ottawa: Canada Mortgage and Housing Corporation, 1996 (External Research Program).

The objective of this research was to develop a modelling methodology that could be used to more accurately estimate annual phosphorus loads to lakes from on-site sewage disposal systems. The report begins with a review of approaches that have been used to estimate phosphorus loads to lakes. These approaches begin with estimates of the potential annual per-capita load from dwellings. They then estimate the lake loading as all or some proportion of the potential phosphorus loading from dwellings - in the total watershed, or in the portion of the watershed within a specified distance from the lake or its tributaries. These approaches do not include explicit consideration of factors and processes that control phosphorus removal in soils. These factors and processes, and commonly available computer models that have been used to describe them, are explored in detail, based on a thorough review of the relevant literature.

These reviews led to identification of models - CHEMFLO for the unsaturated zone, and MODFLOW and MT3D for the saturated zone - that offered the capability of representing the factors and processes involved in phosphorus removal. Exploration of the use of these models began with sensitivity analyses, based on a range of typical soil parameters; the results suggest responses, in terms of phosphorus removal, to variations in significant model parameters. Field and laboratory studies provided evidence about possible phosphorus removal under a variety of site and soil conditions. They also provided data for model calibration and verification.

SEWAGE DISPOSAL/EAUX USÉES

Completed Reports/Rapports terminés

Modelling results reported here include the application of field data from one site to calibrate the unsaturated zone model for phosphorus removal, and application of the calibrated model to other sites. Also included are results of groundwater flow modelling in the saturated zone. Continuing work to apply project data to modelling phosphorus movement in the saturated zone is described.

This study focused on phosphorus movement at the scale of single properties. Modelling at this scale can identify and quantify significant factors and processes that control phosphorus movement. However, further work is necessary to determine the most effective manner in which this information can be incorporated into watershed scale estimates of phosphorus loads.

Ongoing Projects/Projets en cours

CONTOUR TRENCH SEPTIC FIELD DISPOSAL SYSTEM IN OTTO TOWNSHIP, ONTARIO

Objective:

To complete the design of a private sewage disposal system designed for five existing homes along Highway 112 in Otto Township, Ontario.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

H. Sutcliffe Limited
9 Wellington Street
P.O. Box 1208
New Liskeard, Ontario
P0J 1P0

CIDN:

0804 0200001

IMPROVEMENTS IN ON-SITE WASTEWATER TREATMENT

Objective:

To select a site for the experimental system, conduct site investigations, design the system and provide a monitoring plan, install water conservation devices, provide monitoring, operation, maintenance and site clean up services, liaison with Steering Committee members and regulators and provide progress reports and a final report which will contain all required information and data analysis.

CMHC Project Officer:

C. Ives

Division:

Technical Policy and Research
Division

Contractor:

Technical University of
Nova Scotia
Centre for Water Resources
Studies
1360 Barrington Street
P.O. Box 1000
Halifax, Nova Scotia
B3J 2X4

CIDN:

1047 0200001

LOWER COST ALTERNATIVE FOR MUNICIPAL SEWER INSPECTION AND MAINTENANCE

Objective:

To reduce subdivision servicing costs by the design, development and testing of a technically sound and innovative structure to replace, at a lower cost, the conventional manhole. Besides substantially reducing the capital cost, the proposed innovative structure can likely mitigate operation and maintenance problems associated with the construction of manholes; etc.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Butler Krebes & Associates Inc.
8616 - 51 Avenue
Suite 210
Edmonton, Alberta
T6E 6E6

CIDN:

1274 0200001

MONITORING PROCEDURES AND MAINTENANCE MANUAL FOR THE OFF-GRID WATER/WASTEWATER TREATMENT SYSTEMS IN CMHC'S TORONTO HEALTHY HOUSE

Objective:

To establish the standards and procedures for monitoring and operating the innovative off-grid systems in the Toronto Healthy House for water and wastewater treatment.

CMHC Project Officer:

C. Ives

Division:

Technical Policy and Research
Division

Contractor:

A.R. Townshend
930 Seven Springs Lane
RR #1
Athens, Ontario
K0E 1B0

CIDN:

0779 0209002

A NEW PROCEDURE FOR EVALUATING THE PERFORMANCE OF ON-SITE SYSTEMS

Objective:

To assess the value of the "Leachfield Evaluation Test" claimed to be successfully used by agencies in California. This is a method for assessing the hydraulic performance of an onsite sewage disposal system.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

D.H. Waller
Technical University of
Nova Scotia
Centre for Water Resources
Studies
1360 Barrington Street
P.O. Box 1000
Halifax, Nova Scotia
B3J 2X4

CIDN:

1289 0200001

Completed Reports/Rapports terminés

AN EVALUATION PROTOCOL FOR COMMUNITY SUPPORTS FOR MARGINALIZED SINGLES IN SOCIAL HOUSING.

Prepared by the Federation of Non-Profit Housing Organizations of Montreal and the CLCS Plateau Mont-Royal. Prepared for the Social and Economic Policy and Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1995.

This document presents a research design developed by the Federation of Non-Profit Housing Organizations of Montreal and the CLCS Plateau Mont-Royal to investigate the effectiveness of providing community supports within social housing to address the needs of low-income singles at risk of marginalization in the central districts of Montreal. The proposed research project will assess the contribution of social housing with community support to the quality of life of tenants and situate this housing concept in a context of evolving communalization. Quality of life refers to individual satisfaction with life in general, place of residence, neighborhood, food, clothing, health, financial situation, free time, outside entertainment, family, friends, coresidents, privacy, security and citizenship.

NOTE : Aussi disponible en français sous le titre : *Protocole d'évaluation du support communautaire des personnes seules marginalisées dans le cadre du logement social.*

UN HABITAT SOCIAL PLUS SÛR : RÉUNION NORD-AMÉRICAINE ET EUROPÉENNE SUR LA PRÉVENTION DE LA CRIMINALITÉ DANS LES COLLECTIVITÉS DE LOGEMENT SOCIAL, MONTRÉAL, QUÉBEC, CANADA, LES 16 ET 17 NOVEMBRE 1995 : RAPPORT FINAL.

Préparé par Brandon C. Welsh et Claude Roy. Préparé pour la Division des politiques et de la recherche sociales et économiques, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1996.

Les 16 et 17 novembre 1995, le Forum européen pour la sécurité urbaine et le Centre international pour la prévention de la criminalité ont tenu à Montréal (Québec) une réunion, dont le thème était «Un habitat social plus sûr», pour examiner les problèmes croissants de criminalité et d'insécurité qui se posent dans les collectivités de logements publics à l'échelle de l'Amérique du Nord et de l'Europe. La première journée de la réunion, les participants ont entendu les exposés présentés sous forme de panel par diverses villes canadiennes, américaines et européennes (Belgique, France, Italie, Écosse et Espagne). Les organismes nationaux d'habitations du Canada, des États-Unis et de la France ont aussi présenté des exposés. La deuxième journée a débuté par une visite d'études et des exposés sur «La Petite Bourgogne», une communauté de logements publics du centre-ville de Montréal dans laquelle on a réduit substantiellement la criminalité par des programmes de prévention appliqués en collaboration avec les locataires, les policiers, les groupes communautaires et l'office municipal de prévention de la criminalité appelé Tandem Montréal. La Rooftops Canada Foundation Inc. a présenté un rapport sur l'importance qu'on accordera à la sécurité urbaine et à la prévention de la criminalité à Habitat II («Le Sommet urbain»), à Istanbul

(Turquie), en juin 1996. Après les sommaires et les perspectives de la réunion, on a procédé à un dialogue sur les recommandations et le suivi.

Ce rapport constitue un sommaire des exposés des panels, des discussions entre participants et membres des panels, et des constatations clés de la réunion. Le rapport comprend quatre annexes : le programme de la réunion, un rapport intitulé «La Petite Bourgogne», une liste des personnes-ressources clés, et la liste des participants à la réunion.

NOTE: Also available in English under the title: *Safer Social Habitat: North American and European Meeting on Preventing Crime in Public Housing Communities, Montreal, Quebec, Canada, November 16 & 17, 1995: Final Report.*

HOUSING AS A RESPONSE TO POVERTY: POVERTY AND THE DEFINITION OF HOUSING NEED.

Prepared by David M. Black, Ekos Research Associates Inc. Prepared for Social and Economic Policy and Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996.

Over the past decade governments have begun to rethink traditional approaches to the provision of social security. One element of this rethinking is to emphasize policy and program designs that encourage individual initiative within partnerships where one or more of the partners can be a government department or agency. These initiatives often have a goal to increase an individual's self-sufficiency or independence. If housing subsidies are used as a key element (i.e., housing is used as a means in the amelioration of poverty) in such a policy then what implications, if any, does this have for the traditional definition of housing need?

This report reviews the definition of core housing need and looks at the impact of using a causal analysis of poverty as an approach to define need. The analysis suggests that it would be possible to use such an approach (in an augmented definition of housing need) and that it would have substantial benefits. In particular, such an approach would, over time, lead to improvements in program design and effectiveness. While the benefits would be considerable there are difficulties that need to be surmounted. The most difficult problem has to do with refining the definition of need and collecting and analyzing the appropriate data. While it is possible to view the work required as something that involves incremental improvements, creation of an appropriate longitudinal database would involve considerable effort.

The paper concludes by suggesting that augmenting the traditional definition of core housing need with a refined, fact-based understanding of the causes of poverty is possible and would produce important benefits. However, adopting this new approach should not be seen as a replacement for the existing definition of core housing need.

Completed Reports/Rapports terminés

PROTOCOLE D'ÉVALUATION DU SUPPORT COMMUNAUTAIRE DES PERSONNES SEULES MARGINALISÉES DANS LE CADRE DU LOGEMENT SOCIAL.

Préparé par la Fédération des organismes sans but lucratif d'habitation de Montréal et le CLSC Plateau Mont-Royal. Préparé pour la Division des politiques et recherche sociales et économiques, Société canadienne d'hypothèques et de logement. Ottawa : SCHL, 1995.

Ce document présente un plan de recherche élaboré par la Fédération des organismes sans but lucratif d'habitation de Montréal et le CLSC Plateau Mont-Royal afin de déterminer dans quelle mesure il est efficace d'offrir, dans le cadre du logement social, des services de support communautaire aux personnes seules à faible revenu et à risque de marginalisation dans les quartiers centraux de Montréal. La recherche proposée évaluera l'apport du logement social avec support communautaire à la qualité de vie des locataires et le situera dans un contexte évolutif de communautarisation. La qualité de vie réfère à la satisfaction de la personne face à la vie en général, le lieu de résidence, le quartier, la nourriture, les vêtements, la santé, la situation financière, le temps libre, le divertissement à l'extérieur, la famille, les ami(e)s, les co-résident(e)s, l'intimité, la sécurité et la citoyenneté.

NOTE: Also available in English under the title: *An Evaluation Protocol for Community Supports for Marginalized Singles in Social Housing.*

SAFER SOCIAL HABITAT: NORTH AMERICAN AND EUROPEAN MEETING ON PREVENTING CRIME IN PUBLIC HOUSING COMMUNITIES, MONTREAL, QUEBEC, CANADA, NOVEMBER 16 & 17, 1995: FINAL REPORT.

Edited by Brandon C. Welsh and Claude Roy. Prepared for Social and Economic Policy and Research Division, Canada Mortgage and Housing Corporation. Ottawa: CMHC, 1996.

On November 16 and 17, 1995, the European Forum for Urban Safety (EFUS) and the International Centre for the Prevention of Crime (ICPC) convened a meeting under the theme, "Safer Social Habitat", in Montreal, Quebec, to address the growing crime and insecurity problems faced by public housing communities across North America and Europe. The first day of the meeting included panel presentations from cities across Canada, the United States, and Europe (Belgium, France, Italy, Scotland, and Spain). Presentations were also made by national housing organizations from Canada, the United States and France. The second day opened with a study tour and presentations of "La Petite Bourgogne", a downtown Montreal public housing community that has reduced crime significantly through prevention schemes carried out in partnership with tenants, police, community groups, and the city crime prevention agency, Tandem Montreal. A report on the importance of urban security and crime prevention to Habitat II ("The City Summit") in Istanbul, Turkey, in June 1996, was presented by Rooftops Canada. Meeting summaries and perspectives were followed by a dialogue on recommendations and follow-up.

SOCIAL HOUSING/LOGEMENT SOCIAL

Completed Reports/Rapports terminés

This report presents a summary of the panel presentations, participant and panelist discussion, and the key findings of the meeting. Four appendices are included at the end of the report: the meeting program, a report on "La Petite Bourgogne", a list of key sources with contacts, and the list of participants in attendance at the meeting.

NOTE : Aussi disponible en français sous le titre : *Un Habitat social plus sûr : réunion nord-américaine et européenne sur la prévention de la criminalité dans les collectivités de logement social, Montréal, Québec, Canada, les 16 et 17 novembre 1995 : rapport final.*

Ongoing Projects/Projets en cours

ANALYSIS OF THE RELATIVE COST AND EFFECTIVENESS OF SELECTED SOCIAL RENTAL HOUSING PROGRAMS

Objective:

To assess the effectiveness of selected rental housing programs in addressing the problems of affordability, adequate supply, and housing quality. The study will determine how traditional non-profit supply programs and shelter allowances perform, over time under different market conditions.

CMHC Project Officer:

P. Deacon

Division:

Social and Economic Policy and Research

Contractor:

Canadian Housing and Renewal Association
251 Laurier Avenue West
Suite 304
Ottawa, Ontario
K1P 5J6

CIDN:

1351 0600001

NATIONAL ENABLEMENT DEMONSTRATION INITIATIVE

Objective:

To undertake the development and coordination of a national enablement demonstration initiative to teach social housing groups the skills and techniques to use in order to develop self-help housing strategies.

CMHC Project Officer:

J. Burr

Division:

Delivery and FP Relations
Division

Contractor:

Canadian Housing and Renewal Association
251 Laurier Avenue West
Suite 401
Ottawa, Ontario
K1P 5J6

CIDN:

1436 1500001

SUSTAINABLE DEVELOPMENT DÉVELOPPEMENT DURABLE

Completed Reports/Rapports terminés

CONSUMER RECEPTIVITY TO SUSTAINABLE COMMUNITY DESIGN: DESIGNING AN ALTERNATIVE FOR THE RESIDENTIAL SUBURB IN CALGARY AND SEEKING THE CONSUMER'S OPINIONS AND CHOICES.

*Prepared by William T. Perks and Andrea Wilton-Clark with the collaboration of Richard Perron and Eduard Epp. Ottawa: Canada Mortgage and Housing Corporation, 1996.
(External Research Program).*

Since the publication of *Our Common Future* (the "Brundtland Commission" report, 1987), planners and urban designers, architects, the development industry and homebuilders, and municipalities and local communities have been challenged to examine how urban environments can be composed, built and managed to satisfy sustainability. In this study, a sample of "consumers" in Calgary, Alberta are asked to say what they think about the possibilities for environmental betterment and resources conservation, and better affordability and choice in housing, that can be offered when a residential community is designed explicitly to achieve sustainable development goals.

The study:

- i) simulates a comprehensive design for sustainable community,
- ii) compares it with conventional suburban communities, in terms of costs and trade-offs, environmental-resource benefits to be gained, household opportunities and satisfactions, etc.,
- iii) provides the consumer with a substantial repertory of images and information in a computerized hypermedia visualization format, and
- iv) tests the receptivity of a small sample of householders to several features of sustainability.

From this first order investigation, it appears that consumers would be receptive to a rather fully-featured sustainable community design. Second, the hypermedia visualization and exhibit media used for the receptivity test procedure are assessed positively --- for their effectiveness as a market research tool, and as an aid to public education and participatory community planning and design.

THE ECOLOGICAL CITY: CANADA'S OVERVIEW.

Prepared by Steven W. Peck, Thompson Gow & Associates and the Federation of Canadian Municipalities. Prepared for Canada Mortgage and Housing Corporation as Canada's contribution to the Project Group on the Ecological Cities of the Group for Urban Affairs of the Organization for Economic Co-operation and Development. Ottawa: CMHC, International Relations Division, 1995.

This Overview highlights the importance of the sustainability of urban regions in achieving national and global sustainability and is intended to act as a resource document in Canada and abroad. The Overview consists of a description of the major characteristics inherent in the ideal of an ecological city and an overview of the domestic factors which influence urban development in Canada, such as government finances, geography and demographics. These include areas such as energy consumption, land use, transportation, water and wastewater treatment, housing, and urban crime. Selected innovative developments are highlighted through the document. Data on municipal programs and policies across a number of areas such as energy efficiency and intensification has been included from the Canadian Urban Research on the Environment (CURE) database information project.

In order to provide assistance to those policy makers who are actively promoting urban sustainability the Overview identifies some of the fundamental or root challenges to establishing ecological cities in Canada. Key issues explored include social values, education, public participation, institutional structures, financial and economic challenges. As well, seven innovative policy tools which may be utilized to help overcome many of the challenges identified are described in detail. Included among these are Strategic Planning Approaches, State-of-the-Environment Reporting, the Ecological Footprint/Appropriate Carrying Capacity Concept, Ecosystem-based Planning, Consensus Decision-Making and Municipal Environmental Assessment.

The focus of the Project Group on the Ecological Cities is on integrated approaches to the development and implementation of sustainability. The Overview contains a description of the existing institutional structures, with emphasis on the important influence exerted by federal departments and agencies whose activities are often overlooked in their impact upon urban sustainability. Integrative institutions such as the Waterfront Regeneration Trust, Projet de Société, the Fraser Basin Management Board, Conservation Authorities and Round Tables are highlighted to illustrate different approaches to institutional frameworks in support of integration. A contact list for Canadian Round Tables and Healthy Communities, as well as a listing of resource documents, have been included in the Appendices.

NOTE : Aussi disponible en français sous le titre : *La ville écologique : aperçu de la situation au Canada.*

SUSTAINABLE DEVELOPMENT DÉVELOPPEMENT DURABLE

Completed Reports/Rapports terminés

LA MAISON REDÉCOUVERTE ^{M.C.}

Préparé par Avi Friedman, David Krawitz ... et autres. Parrainé par Matériaux Cascades Inc., la Société canadienne d'hypothèques et de logement, Ressources naturelles Canada (Groupe du bâtiment) et la Société d'habitation du Québec. Montréal : Université McGill, École d'architecture, 1996.

NOTE : Disponible à : L'École d'architecture McGill, Programme de la maison à coût abordable, 815, Sherbrooke ouest, Montréal (Québec) H3A 2K6. À l'attention de David Krawitz. Prix : 35, 00\$.

Cette monographie décrit la Maison redécouverte, maison de démonstration abordable et écologique, construite devant l'École d'architecture de l'université McGill à Montréal, et qui sera en montre, pendant tout le mois de septembre 1996.

Comme pour son modèle précurseur, la Maison évolutive, l'abordabilité constitue le critère clé de la Maison redécouverte. La Maison redécouverte est constituée d'une seule structure pouvant former une maison individuelle, un duplex ou un triplex et être vendue sous l'une de ces trois formes. Les occupants peuvent en outre adapter l'intérieur de la maison à leur style de vie ou à leurs ressources budgétaires en choisissant des composantes dans un catalogue. Pour la Maison redécouverte, les concepteurs ont étudié différents matériaux et techniques susceptibles de produire une habitation plus écologique. La démonstration établit qu'il est non seulement possible d'améliorer sensiblement les qualités environnementales d'une maison, mais également de la réaliser sans en augmenter considérablement les coûts de construction. Cet aspect pratique est essentiel au principe du développement durable qui veut que tout aménagement se fasse en harmonie avec les besoins environnementaux, sociaux et économiques de la société.

NOTE: Also available in English under the title : *The Next Home*. TM

THE NEXT HOME ^{T.M.}

Prepared by Avi Friedman, David Krawitz ... et al. Sponsored by Matériaux Cascades Inc., Canada Mortgage and Housing Corporation, Natural Resources Canada Building Group and Société d'habitation du Québec. Montreal: McGill University, School of Architecture, 1996.

NOTE: Available from: McGill School of Architecture, Affordable Homes Program, 815 Sherbrooke St. West, Montreal, Quebec, H3A 2K6, Attn: David Krawitz. Price; \$35.00.

This monograph describes The "Next Home" -- an affordable and sustainable demonstration house -- constructed in front of the School of Architecture on the McGill University campus in Montreal, which will be on display throughout September 1996.

As with its forerunner, the "Grow Home", affordability is a key criterion in the "Next Home". The "Next Home" offers a single structure which can be built and sold as a single-family unit, a duplex, or a triplex. Residents can also adapt the unit's interior by selecting from a prepared catalogue of components which respond to life-style choice and budgetary constraints. Alternative building materials and techniques which could provide a more environmentally-friendly house have been surveyed and evaluated for use in the "Next Home". The project will demonstrate that it is not only possible but practical to improve the environmental qualities of a home substantially without the need to increase construction costs significantly. This practicality is fundamental to the concept of sustainability which requires that development take place which is responsive to the environmental, social and economic needs of society.

NOTE : Aussi disponible en français sous le titre : *La Maison redécouverte*^{M.C.}

LA VILLE ÉCOLOGIQUE : APERÇU DE LA SITUATION AU CANADA.

Préparé par Steven W. Peck, Thompson-Gow Associates et la Fédération canadienne des municipalités. Préparé pour la Société canadienne d'hypothèques et de logement à titre d'exposé national au Canada, au Groupe du Projet sur la ville écologique de l'Organisation de coopération et de développement économiques. Ottawa : SCHL, Division des relations internationales, 1995.

Cet aperçu national fait ressortir la mesure dans laquelle le développement durable des régions urbaines est important pour parvenir au développement durable national et mondial et il est destiné à servir de document d'information pour les personnes intéressées au Canada et à l'étranger. L'aperçu national est une description des principales caractéristiques inhérentes à l'idéal de la ville écologique et une vue d'ensemble des facteurs intérieurs qui influent sur le développement urbain au Canada, comme les finances publiques, la géographie et les caractéristiques démographiques. Il relève les tendances nationales d'un large éventail d'indicateurs du développement urbain durable. Ces indicateurs comprennent la consommation d'énergie, l'utilisation des sols, les transports, l'épuration de l'eau et le traitement des eaux usées, le logement et la criminalité en milieu urbain. Certaines initiatives novatrices sont mises en lumière dans tout le document. Ce dernier comprend aussi des données sur les politiques et programmes municipaux dans un certain nombre de domaines comme l'efficacité énergétique et la densification, qui ont été tirées de la base de données Canada Urbain : Recherche Environnement (CURE).

Afin d'aider les décideurs qui favorisent activement le développement urbain durable, l'aperçu national relève quelques-uns des obstacles fondamentaux à l'établissement de villes écologiques au Canada. Les questions clés examinées comprennent les valeurs sociales, l'éducation, la participation du public, les structures institutionnelles et les défis financiers et économiques. En outre, sept outils de politique novateurs qui pourraient être utilisés pour aider à surmonter un grand nombre des difficultés relevées sont décrits en détail. Ces outils comprennent les méthodes de planification stratégique, les rapports sur l'état de l'environnement, le concept de l'empreinte écologique ou de la capacité limite usurpée, la planification basée sur les écosystèmes, la prise de décisions par consensus et les évaluations environnementales municipales.

SUSTAINABLE DEVELOPMENT DÉVELOPPEMENT DURABLE

Completed Reports/Rapports terminés

Le Projet sur la ville écologique est axé sur les méthodes intégrées de mise en oeuvre du développement durable. L'aperçu national contient une description des structures institutionnelles existantes et met l'accent sur l'influence importante qu'exercent les ministères et organismes fédéraux dont on oublie souvent les activités qui ont un impact sur le développement urbain durable. Le document présente certaines institutions d'intégration, comme la Fiducie de régénération du secteur riverain, le Projet de Société, le Fraser Basin Management Board, les offices de protection de la nature et les tables rondes, pour illustrer différents cadres institutionnels à l'appui de l'intégration. Une liste des personnes-ressources des tables rondes et des membres du Réseau canadien des communautés en santé ainsi qu'une liste de documents d'information sont présentées dans les annexes.

NOTE: Also available in English under the title: *The Ecological City: Canada's Overview*.

Ongoing Projects/Projets en cours

COMMUNITY REPORTING AND INDICATORS PROJECT: AN ANALYTICAL TOOL FOR URBAN SUSTAINABILITY -SCOPING EXERCISE

Objective:

Investigate the feasibility of developing an analytical tool-set to assist communities and municipalities in their own assessment of progress toward sustainability.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and Research
Centre for Future Studies in Housing and Living Environments

Contractor:

ESSA Technologies Ltd.
1765 West 8th Avenue
Suite 300
Vancouver, British Columbia
V6J 5C6

CIDN:

1447 0200005

MULTIFAMILY HOUSING FOR COMMUNITY SUSTAINABILITY

Objective:

Develop information to assist municipalities and the development industry to develop land at higher than average densities while maintaining or improving the quality of life.

CMHC Project Officer:

F. Grammenos

Division:

Technical Policy and Research Division

Contractor:

Quadrangle Architects Limited
380 Wellington Street West
Toronto, Ontario
M5V 1E3

CIDN:

1628 0300001

SUSTAINABLE LANDSCAPE DESIGN FOR RESIDENTIAL DEVELOPMENTS

Objective:

To highlight the link between sustainable development for housing with the condition, composition and use of native vegetation.

CMHC Project Officer:

S. Sandrock

Division:

Social and Economic Policy and Research
External Research Program

Contractor:

Karen Vagelatos
Vagelatos Associates Landscape Architecture Ltd.
207-2211 West 4th Avenue
Vancouver, British Columbia
V6K 4S2

CIDN:

1466 0200001

SUSTAINABLE DEVELOPMENT DÉVELOPPEMENT DURABLE

Ongoing Projects/Projets en cours

VISUALIZING SUSTAINABILITY: ANALYZING PREFERENCES FOR SUSTAINABLE COMMUNITY DESIGN

Objective:

The scope of this research is to provide a visual forum for the exploration of sustainable community design on the Internet. The purposes of the forum are to educate the public and to provide for the free and open exchange of ideas.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Professor Richard Perron
University of Winnipeg
Department of Landscape
Architecture
Winnipeg, Manitoba
R3T 2N2

CIDN:

1640 0200001

TELEWORK/TÉLÉTRAVAIL

Ongoing Projects/Projets en cours

BEYOND THE HOME OFFICE: AN EXPLORATORY STUDY OF RESIDENTIALLY-BASED, SHARED TELEWORK SPACES

Objective:

To develop and explore a new concept - a residentially-based shared telework space.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Laura C. Johnson
Associates Inc.
374 Sackville Street
Toronto, Ontario
M4X 1S5

CIDN:

1458 0200001

HOME-BASED BUSINESSES, LOCAL ECONOMIC DEVELOPMENT AND LAND USE POLICY: CONFLICTS AND OPPORTUNITIES

Objective:

To carry out the research project entitled "Home-Based Businesses, Local Economic Development and Land Use Policy: Conflicts and Opportunities.

CMHC Project Officer:

D. Chamberland

Division:

Social and Economic Policy and
Research
External Research Program

Contractor:

Dr. James E. Randall
Assistant Professor
University of Saskatchewan
Department of Geography
Saskatoon, Saskatchewan
S7N 0W0

CIDN:

1464 0201001

TELEWORK/TÉLÉTRAVAIL

Ongoing Projects/Projets en cours

TRAVAIL À DOMICILE ET AJUSTEMENTS RÉSIDENTIELS

Objet :

Explorer comment les télétravailleurs adaptent leur logement en fonction de leurs besoins et établir des principes de rénovation fondés sur diverses situations.

de télétravail, qui pourraient améliorer la qualité de vie des résidents.

Agent de projet pour la SCHL :
D. Chamberland

Division :
Politiques et recherche sociale et économiques

Contractant :

Jocelyn Duff
Habitat sur mesure enr.
4626, de Bordeaux
Montréal (Québec)
H2H 2A1

NIC :
1643 0200001

WATER CONSERVATION EAU -- CONSERVATION

Ongoing Projects/Projets en cours

APPLICATION FOR SHOWER WASTE WATER HEAT RECOVERY

Objective:

To test the performance of a heat recovery shower product.

CMHC Project Officer:
M. Macpherson

Division:
Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:
Heat Exchangers NF
Incorporated
26 Georgia Drive
Stephenville, Newfoundland
A2N 2T5

CIDN:
1500 0200001

DEVELOPMENT OF A RESIDENTIAL WATER USE MODEL

Objective:

To carry out the development of a residential water use model.

CMHC Project Officer:
P. Russell

Division:
Technical Policy and Research Division
Panel on Energy Research and Development

Contractor:
Centre for Water Resources Studies
Technical University of Nova Scotia
P.O. Box 1000
1360 Barrington Street
Halifax, Nova Scotia
B3J 2X4

CIDN:
1422 0200002
1422 0800001

MULTI-RESIDENTIAL BUILDING WATER EFFICIENCY STUDY

Objective:

To document water savings associated with water efficient plumbing fixture replacements in a multi-residential case study, and analyze the prospects for

market penetration of water efficient technologies in multi-residential buildings.

CMHC Project Officer:
M. Macpherson

Division:
Social and Economic Policy Research
External Research Program

Contractor:
Christopher Gates
REIC Consulting Services
15010 Yonge Street
Aurora, Ontario
L4G 1M6

CIDN:
1654 0200001

WATER CONSERVATION EAU -- CONSERVATION

Ongoing Projects/Projets en cours

THE SUSTAINABLE HOME WATER SYSTEM

Objective:

To develop a system which will collect rain water for non-potable uses in a house plus a grey water heat recovery and recycling system.

CMHC Project Officer:

M. Macpherson

Division:

Social and Economic Policy and Research
Housing Technology Incentives Program

Contractor:

A.C.E. Alternative and Conservation Energies Inc.
1909-10th Avenue S.W.
Calgary, Alberta
T3C 0K3

CIDN:

1224 0200001

WATER RECLAMATION PROJECT

Objective:

To develop a residential water reclamation system and to be in a position to hand over to Conservation Co-operative Homes Inc. a viable reclamation system.

CMHC Project Officer:

P. Russell

Division:

Technical Policy and Research Division

Contractor:

Conservation Co-operative Homes Inc.
140 Mann Avenue
Ottawa, Ontario
K1N 1E5

CIDN:

1573 02010003

WATER RECYCLING DEMONSTRATION

Objective:

Demonstrate water recycling at the Conservation Co-op in the Ottawa neighbourhood of Sandy Hill.

CMHC Project Officer:

P. Russell

Division:

Technical Policy and Research Division

Contractor:

Totten Sims Hubicki Associates
20 Terence Matthews Crescent
Kanata, Ontario
K2M 2C4

CIDN:

1573 0200001

WORK ENVIRONMENT ENVIRONNEMENT DU TRAVAIL

Ongoing Projects/Projets en cours

REVUE DES ÉCRITS SUR LES CHANGEMENTS DANS L'ENVIRONNEMENT DU TRAVAIL

Objet :

Effectuer une revue des écrits qui présentent les changements dans la nature du travail au cours des dernières années au Canada.

Agent de projet pour la SCHL :

B. Sanscartier

Division :

Politiques et recherche sociales et économiques
Centre d'études prospectives sur l'habitation et le cadre de vie

Contractant :

Université de Montréal
École de relations industrielles
C.P. 6128
Succursale Centre-Ville
Montréal (Québec)
H3C 3J7

NIC :

1681 0200001

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